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ABSTRACT

This document is a collection of materials developed for the Smithsonian Institution/George Washington University Anthropology for Teachers Program. The program was established to encourage junior and senior high school teachers to integrate anthropology into their social studies and science classes. The materials include several bibliographies: (1) "Anthropological Materials Available from the Smithsonian Institution"; (2) "Human Evolution," including Introduction to Paleoanthropology, Evolution of Brain Behavior, and Human Evolutionary Ecology and Archaeology; (3) "Primate Behavior," which also contains classroom activities; (4) "Growing Up in Non-Western Societies," which includes South America; (5) "North American Indians"; (6) "Periodicals of Anthropological Interest"; (7) "Introductory Readers"; and (8) "Films for Teaching Ethnicity." Articles on anthropological topics include: (1) "What's New in Human Evolution"; (2) "Modern Human Origins--What's New with What's Old"; (3) "Nacirema Initiation Ceremonies"; and (5) "Tales Bones Tell." Activity topics include: (1) "A Family Folklore Activity"; (2) "Exploring Historic Cemeteries"; (3) "Zoo Labs"; (4) "Mother-Infant Observation"; (5) "Reconstructing Babylonian Society from Hammurabi's Code of Law"; (6) "North American Myths and Legends"; (7) "Teaching Ethnographic Interviewing; and (8) "Archaeology in the Classroom (Comparative Garbage Exercise)." Other lists give names of organizations to join, fieldwork opportunities for teachers and students, and student field projects. (PVD)

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ED 403 140

Information from the
National Museum of Natural History
SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

Thank you for your recent request for teaching materials in anthropology. Enclosed is the Teacher's Resource Packet: Anthropology. Many of the materials in this packet were developed for the Smithsonian Institution/George Washington University Anthropology for Teachers Program funded from 1978 - 1982 by the National Science Foundation. This program was established to encourage junior and senior high school teachers to integrate anthropology into their social studies and science classes. *Anthro Notes*, a Museum of Natural History Bulletin for Teachers, produced three times a year and distributed free of charge, also provides useful ideas and articles of interest to teachers. If you wish your name to be placed on the newsletter's mailing list, write to this office.

Again, thank you for your interest.

ANTHROPOLOGY OUTREACH OFFICE
DEPARTMENT OF ANTHROPOLOGY
SMITHSONIAN INSTITUTION

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INTRODUCTORY READERS

Locating outstanding texts and readers for students at any level always presents a challenge; for high school and beginning undergraduates, the challenge can be particularly frustrating. Hence, it is with real pleasure that *Anthro.Notes* editors can recommend two introductory readers for beginning students, edited by Aaron Podolefsky and Peter J. Brown and published by Mayfield Publishing Co.:

Applying Anthropology, An Introductory Reader, 2nd ed., 1992.

Applying Cultural Anthropology, An Introductory Reader, 1991.

Although the titles reflect the editors' interest in the uses of anthropology in today's world, the readers are not designed for courses in Applied Anthropology. Instead, the sequence of chapters follows the organization of most standard introduc-tory textbooks. The articles in these readers, however, are anything but standard. For the most part, the readings are short, well-written and varied, with many taken from "popular" journalistic sources such as *Natural History*, *Discover*, *The New York Times*, and *Human Nature*.

The first reader, *Applying Anthropology*, is divided into three sections: Biological Anthropology, Archaeology, and Cultural Anthropology. The longest section is the third, with articles arranged under the subheadings of Culture; Culture and Communication; Culture and Agriculture; Economy and Business; Sex Roles and Socialization; Politics, Law, and Warfare; Symbol, Ritual, and Curing; and Social and Cultural Change. The Biological Anthropology section reflects the variety and "applied" nature of many of the readings. The section includes "Teaching Theories: The Evolution-Creation Controversy," Robert Root-Bernstein and Donald L. McEachron, *The American Biology Teacher*, October 1982; "Ancient Genes and Modern Health," S. Boyd Eaton and Melvin Konner, *Anthroquest*, Winter 1985; and "Profile of an Anthropologist: No Bone Unturned," Patrick Huyghe, *Discover*, December, 1988.

The second reader, *Applying Cultural Anthropology*, is divided into eleven sections related to culture; many overlap the sections and selections of the first reader. Each section has three or four readings that run the gamut from well-known classics (Horace Miner's "Body Ritual Among the Nacirema," Laura Bohannan's "Shakespeare in the Bush") to timely articles from unusual sources ("The Aids Epidemic in San Francisco" from *Anthropology and Epidemiology*, 1986).

The editors of these readers clearly care about students and anthropology. They believe that anthropology can inspire students and that students need to become familiar both with the fundamental questions of humanity addressed by anthropologists and the practical applications of the field.

In both readers, several of the articles exemplify research methods in action, or profile anthropologists working outside of academia. For example, in the section on fieldwork in *Applying Cultural Anthropology*, Margaret Mead's "Letter from Peri-Manu II" allows students to see Mead reflecting on her long involvement with the people of Manus; and later in the section on Socialization and Parenting, Jeanne Fulginiti explores her career as a school administrator and the ways her anthropolo-gical training helped her devise solutions for her school system ("Profile of an Anthropologist: Ethnography in School Administration").

To make these readers even more practical, the editors have added a short introduction with five questions before each reading, helping to focus students' attention. Most of the questions highlight central themes of the reading or draw attention to important details. Some questions are open-ended and direct students and faculty to avenues for further thought and discussion. In summary, these readers are fine resources to bring anthropological adventure to the classroom.

Ruth O. Selig

(Originally published in the Spring 1993 issue of *Anthro.Notes*, vol. 15, no. 3)

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PERIODICALS OF ANTHROPOLOGICAL INTEREST

Below is a description of journals and magazines that teachers and students may find useful for background information and specialized research on anthropological topics. Scholarly publications of the American Anthropological Association and its affiliates, described in the leaflet "Organizations to Join," are excluded. Each periodical described below is highly recommended for school libraries.

American Indian Quarterly **includes articles, review essays, and book reviews on historical and contemporary research (in areas of history, education, mythology, and economic and culture change) on American Indians. Contact: Kirt Card, University of Nebraska Press, P.O. Box 880484, 312 N. 14th Street, Lincoln, Nebraska 68588-0520. Phone # (402) 452-5946.**

Annual Review of Anthropology **contains topical articles providing in-depth reviews of recent research. A wide range of areas in physical and cultural anthropology is covered including applied anthropology. Yearly volume. Write: Annual Reviews, Inc., Box 10139, 4139 El Camino Way, Palo Alto, CA 94303-0897. Phone # (415) 493-4400.**

AnthroNotes, A National Museum of Natural History Bulletin for Teachers **contains articles on current research in the field of anthropology, on teaching activities and resources, and on fieldwork opportunities, in the winter issue. Published three times a year, this 16-page publication is free-of-charge. Write: Anthropology Outreach and Public Information Office, NHB 363 MRC 112, Smithsonian Institution, Washington, DC 20560.**

Archaeology **is a heavily illustrated journal written for the general public covering ancient cultures of the Old and New Worlds. It contains feature articles, current exhibitions, book and film reviews, and travel information. The March/April issue features an archeology travel guide to sites available to the public in the Old World--Africa, Europe, the Pacific, Asia, South and Central America, and Middle and Near East. The May/June issue covers archeological sites in the New World--Canada, Mexico, and the United States. Published bimonthly. Order through: Palm Coast Data, PO Box 42047, Palm Coast, FL 32142-0427. Toll free # (800) 829-5122.**

Biblical Archaeology. **Magazine published by the American School of Oriental Research. Write to: Biblical Archaeologist, Scholars Press, Box 15399, Atlanta, GA. 30333-0399. Phone # (301) 727-2320.**

Biblical Archaeology Review. **Magazine published by the Biblical Archaeology Society, 3000 Connecticut Ave., N.W., Suite 300, Washington, D.C. 20008. Phone # (202) 387-8888.**

Calliope, World History for Young People **is published by Cobblestone five times during the school year; its first issue came out September/October 1990. Write to: Cobblestone Publishing Inc., 7 School St., Peterborough, NH 03458; or call (603) 924-7209.**

Cobblestone, The History Magazine for Young People **is an excellent monthly magazine geared for ages 8-14. Some issues include articles on Native Americans; the February 1984 issue was entirely focused on one cultural group, the Cherokee. Write: Cobblestone Publishing Inc., 7 School St.,**

Peterborough, NH 03458; or call (603) 924-7209.

Current Anthropology, sponsored by The Wenner-Gren Foundation for Anthropological Research, includes articles on recent research from all the subdisciplines of anthropology. Each main article is followed by a section with specialists' critiques and with the author responding to each comment. A scholarly and readable, current and informative journal. Published six times a year. Write: Current Anthropology, University of Chicago Press, Journals Division, 5720 South Woodlawn Avenue, Chicago, IL, 60637. Phone # (312) 753-3347.

Faces: The Magazine About People, published by Cobblestone Publishing Inc. with the cooperation of the American Museum of Natural History in New York, is geared for ages 8-14 and covers a wide range of topics in cultural anthropology and archeology. Each issue of this well-illustrated magazine focuses on a theme presented through articles, original activities, games, craft projects, recipes, and puzzles. Write: Cobblestone Publishing Inc., 7 School St., Peterborough, NH 03458; or call (603) 924-7209.

National Geographic, the official journal of the National Geographic Society, often includes articles on anthropology and archeology with beautiful illustrations. Yearly indexes can be of help to teachers and students in researching a wide variety of topics. Published monthly. Write: National Geographic Society, 17th and M Streets, N.W., Washington, D.C. 20036. Phone # (202) 857-7000.

Natural History magazine contains well-illustrated articles covering the natural sciences including animal behavior, ecology, mineral sciences, and anthropology. A regular column, "This Side of Life," by Stephen Jay Gould, often touches on evolutionary theory and the history of science. Published monthly. Write: American Museum of Natural History, Central Park West at 79th St., New York, NY 10024.

SACC Notes which stands for the Society for Anthropology in Community Colleges. Published by the AAA (American Anthropological Association) and SACC biannually. Write to: Lloyd J. Miller, Editor, Des Moines Area Community College, 2006 South Ankeny Boulevard, Ankeny, Iowa 50021. Phone # (515) 964-6435.

Science magazine is published weekly by the American Association for the Advancement of Science. The articles are highly technical with emphasis on the biological sciences but include the latest research in anthropology. Write: American Association for the Advancement of Science, 1333 H St., N.W., Washington, D.C. 20005. Phone # (202) 326-6500.

Scientific American, written for the educated public, has somewhat technical and lengthy articles. This journal is recommended particularly for upper high school students and teachers. Published monthly. Write: Scientific American, 415 Madison Ave., New York, NY 10017. Phone # (212) 754-0550.

Teaching Anthropology Newsletter contains articles and curriculum ideas relating to the field of anthropology and provides a forum for teachers to exchange ideas. Published free-of-charge semiannually in the fall and spring. Write: Department of Anthropology, Saint Mary's University, Halifax, Nova Scotia B3H 3C3. Phone # (902) 420-5628.

ANTHROPOLOGY OUTREACH
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NORTH AMERICAN INDIANS

Bibliographies, films, curriculum Units,
& Other Teaching Materials

TEACHER BIBLIOGRAPHY

Basic Resources:

Directory of North American Indian Museums and Cultural Centers, 1981. (North American Indian Museums Association, 466 Third St., Niagara Falls, NY 14301.)
A useful description of the services and programs available at the growing number of Indian Museums in North America.

Handbook of North American Indians. Sturtevant, William C. general editor. Volume 8: California, 1978; Volume 15: Northeast, 1979; Volume 9: Southwest (Prehistory and Pueblos), 1980; Volume 10: Southwest (non-Puebloan Peoples); Volume 6: Subarctic, 1981; Volume 5: Arctic, 1984; Volume 11: Great Basin, 1986; Vol. 4: History of Indian-White Relations, 1988; Volume 7: Northwest Coast, 1990; others to follow until 20 volumes are completed. Washington, D.C.: Smithsonian Institution.

An encyclopedia summarizing knowledge about all Native peoples north of Mesoamerica, including cultures, languages, history, prehistory, and human biology. The standard reference work for anthropologist, historians, students, and the general public.

Insight Guide: Native America. 1st ed. Edited by John Gattuso. APA Publications (HK) Ltd., 1993.
A guide to communities, cultures, and history of American Indians with a travel guide that includes dates of cultural and ceremonial events and a list of selected tribes and their addresses.

Marquis, Arnold. *A Guide to America's Indians: Ceremonials, Reservations, and Museums.* Norman: University of Oklahoma Press, 1974.
Very useful, but with some omissions and inaccuracies. Appendices include listing of Indian museums, organizations, and publications, helpful for those visiting Indian lands and museums.

Murdock, George Peter and Timothy J. O'Leary. *Ethnographic Bibliography of North America.* 4th ed. 5 vols. (Behavior Science Bibliographies Series) New Haven, CT: Human Relations Area Files, 1975.
A nearly complete listing of serious published accounts of Native American cultures. Organized by geographic area and by tribe. Tribal maps included.

Newberry library series. The Newberry Library Center for the History of American Indian Bibliographic Series. Bloomington: Indiana University Press, 1972-.
Annotated bibliography for various areas and tribal groups. Each volume includes an introductory bibliographic essay with citations to the alphabetical listing of books which follows.

Weatherford, Elizabeth, and Seubert, Emelia, eds. *Native Americans on Film and Video*. Vol. 2. New York, NY: National Museum of the American Indian, 1988.

General Books:

Berkhofer, Robert F. *The White Man's Indian: Images of the American Iindian From Columbus to the Present*. New York: Random House, 1979.
In examining how the White image of the Indian "as separate and single other, developed and persisted over time, the author illuminates contemporary views if Indian people as well. The book analyzes the stereotypes and images developed through the centuries by settlers, intellectuals, writers, artists, and government leaders.

Calloway, Colin G., editor. *New directions in Aerican Indian History*. (D'Arcy McNickle Center Bibliographies in American Indian History, vol. 1) Norman: University of Oklahoma Press, 1992.

Driver, Harold E. *Indians of North America*. 2nd rev. ed. Chicago: University of Chicago Press, 1969.
Comprehensive, detailed, densely factual, with numerous maps. Differs from all other modern treatments in being arranged by topic rather than by regions and cultures. Strong on technology, material culture, and social organization.

Erdoes, Richard. *Crying For a Dream: The World Through Native American Eyes*. Santa Fe, NM: Bear & Company Publishing, 1989.
A collection of powerful archival and contemporary images illustrating American Indian ceremony, civil rights, people, and land. The accompanying texts consist of the words of those depicted in the photographs.

Josephy, Alvin M. Jr. et al. *Wounded Knee: Lest We Forget*. Seattle: University of Washington Press, 1992.

Josephy, Alvin M., Jr. et al., eds. *The Indian Heritage of America*. Enlarged ed. (American Heritage) Burlington, MA: Houghton Mifflin Co., 1991.
Popular account of the Indians of North, Central, and South America from the time of man's emergence in the New World through recent times. Some illustrations and a good bibliography. (Also for students)

Josephy, Alvin M., Jr. *The Patriot Chiefs, A Chronicle of American Indian Resistance*. New York: Viking Penguin, 1969.
Nine chapters, chronologically organized, revolve around Indian patriots such as Pontiac, Tecumseh, and Chief Joseph. Subjects from a wide selection of cultures, time periods, and geographic areas. (Also for students.)

Josephy, Alvin M., Jr. *Now That the Buffalo's Gone: A Study of Today's American Indian*. Norman: University of Oklahoma Press, 1984.

Kappler, Charles J., compiler. 1904-1941, *indian affairs: laws and treaties*. 5 vols. Reprint of 1941 ed. New York, NY: AMS Press, 1971.

Klein, Barry T. *Reference Encyclopedia of the American Indian*. 6th ed. 1992. 2 vols. Available from Todd Publications, 18 N. Greenbush Rd., West Nyack, NY 10994. (Includes Government agencies, museums, tribal councils, Who's Who, reservations, among other topics)

Leacock, Eleanor Burke and Nancy Oestreich Lurie, eds. *North American Indians in Historical Perspective*. Prospect Heights, IL: Waveland Press, Inc., 1988.
A first-rate collection of case study essays with a focus on recent Indian history and the pattern of Indian-White relations.

Nabokov, Peter, ed. *Native American Testimony: An Anthology of Indian and White Relations: First Encounter to Dispossession*. San Bernardino, CA: Borgo Press, 1991.
A compendium of documents recording Indian-White relations over the past 500 years is told from the Indian perspective. Over 100 accounts, taken from a wide range of sources including traditional narratives, speeches, Indian autobiographies, reservation newspapers, personal interviews and letters, are included. This book is especially strong in its documentation of 20th century American Indian history.

Native American Directory: Alaska, Canada, and the United States. 1982. Edited by Fred Synder. Published by the National Native American Co-Operative, P.O. Box 5000, San Carlos, AZ 85550-0301. (Directory of Native American events and organizations)

Rachlin, Carol K., and Marriott, Alice. *American Epic: The Story of the American Indian*. New York: New American Library, 1970.
Emphasis on the impact of European settlement on various tribal cultures. A popular introduction to American Indians.

Spencer, Robert F., and Jennings, Jesse D., et al. *The Native Americans: Ethnology and Backgrounds of the North American Indians*. 2nd ed. New York: Harper and Row, 1977.
This college level textbook surveys archeology, historic and modern cultures, region by region, with selected tribes treated in more detail. Written by well-chosen specialists.

Spicer, Edward H. *A Short History of the Indians of the United States.* Melbourne, FL: Krieger Publishing Col, 1983.
A brief historical summary from the viewpoint of Indian cultural development and Indian-Indian relations. Second half of the book is a collection of documents, divided into four sections: Indian History as seen by Indians, White Policy, White Viewpoints, Indian Prophets and Spokesmen. (Could be used by senior high school students as well.)

Thornton, Russell. *American Indian Holocaust and Survival: Population History Since 1492.* (Civilization of the American Indian Series, 186) Norman: University of Oklahoma Press, 1990.

Utley, Robert M. and Wilcomb E. Washburn. *Indian Wars.* Burlington, VT: Houghton Mifflin, 1985.
Amply illustrated volume. First part focuses on the Indian-White conflict in the East (1492-1850), second half deals with the Western battles, ending with the Battle of Wounded Knee in 1890.

Viola, Herman. *After Columbus: The Smithsonian Chronicle of the North American Indians.* Washington, DC: Smithsonian Books, 1991.

Waldman, Carl. *Encyclopedia of Native American Tribes.* New York: Facts on File, 1987.

Washburn, Wilcomb E. *The Indian in America.* (New American Nation Series.) New York, NY: Harper Collins, 1981.
Historical account focusing on the impact of European settlement on Indian cultures. Organized chronologically, from Colonial to modern times.

Weatherford, Jack. *Indian Givers: How the Indians of the Americas Transformed The New World.* New York: Crown, 1987.

________. *Native Roots: How the Indians Enriched America.* New York: Crown, 1991.

________. *Savages & Civilization: Who Will Survive?* Crown Publ. Group, 1994.

Prehistory:

Fagan, Brian. *Ancient North America: The Archaeology of a Continent.* 2nd ed. New York: Thames & Hudson, 1995.

________. *Kingdoms of Gold, Kingdoms of Jade: The Americas Before Columbus.* New York: Thames & Hudson, 1991.

Humphrey, Robert L. and Mary E. Chambers. *Ancient Washington, vol. 6: Indian Cultures of the Potomac Valley.* Washington, D.C.: George Washington University, 1977.
A brief over-view of the American Indian cultures of the Potomac Valley from the PaleoIndian to Woodland periods. Well written and readily understood.

Jennings, Jesse David. *Prehistory of North America*. 3rd ed. Palo Alto, CA: Mayfield Pubs., 1989.
Introductory college text emphasizing culture change through time. Separate chapters on Mexico, the Southwest, and the Arctic. Introductory chapter on archeological methods.

Josephy, Alvin M. Jr., ed. *America in Fourteen Ninety-Two: the world of the Indian Peoples Before the Arrival of Columbus*. Chicago, IL: Newberry Library, 1991.

Kopper, Philip, and the editors of Smithsonian Books. *The Smithsonian Book of North American Indians Before the Coming of the Europeans*. Washington, DC: Smithsonian Books. Distributed by H. N. Abrams, 1986.

Snow, Dean R. *The Archaeology of North America*. (The Indians of North America Series) New York: Chelsea House, 1992.

Wauchope, Robert. *Lost Tribes and Sunken Continents; Myths and Methods in the Study of American Indians*. Ann Arbor, MI: Books on Demand, Div. of University Microfilm International, 1962.
An amusing, readable survey of various pseudo-scientific (crackpot) theories about the origin of the American Indian, seen against the hard light of modern scientific evidence.

Williams, Stephen. *Fantastic Archaeology: The Wild Side of North American Prehistory*. Philadelphia: University of Pennsylvania Press, 1991.

Modern Conditions:

Brown, Dee. *Bury My Heart at Wounded Knee; An Indian History of the American West*. New York: H. Holt, & Co., 1971.
An emotional, readable "narrative of the conquest of the American West as the victims experienced it."

Deloria, Vine, Jr. *Custer Died for Your Sins: An Indian Manifesto*. Norman, OK: University of Oklahoma Press, 1988, 1969.
Deloria is a Standing Rock Sioux who intelligently, bitingly, and wittily attacks stereotypes and myths. In this book, Deloria discusses the Indians' plight vis-a-vis lawyers, anthropologists, government agents, religious missionaries, and Indian leaders.

Deloria, Vine, Jr., ed. *American Indian Policy in the Twentieth Century*. Norman: University of Oklahoma Press, 1992.

Fixico, Donald L. *Urban ildians*. New York, NY: Chelsea House Pubs., 1991.
An informative book that provides not only an historical perspective of Indians as urban dwellers but a personal perspective as well with Indian people relating their own experiences and responses to governmental policies that attempted to force their assimilation into white culture.

Lurie, Nancy Oestreich. "The Contemporary American Indian Scene." In *North American Indians in Historical Perspective*. Edited by Eleanor Burke Leacock and Nancy Oestreich Lurie. Prospect Heights, IL: Waveland Press, 1988.

Trafzer, Clifford E., ed. *American Indian Identity: Today's Changing Perspectives*. 2nd ed. Sacramento, CA: Sierra Oaks Publishing Co., 1989.
Seven essays written by American Indians examine contemporary American Indian identity. Among the topics are: adaptability and practicality of American Indians in their use of Country-Western dress and the pickup truck, the development of the middle class, American Indian Studies Programs, and the historian's role in using both non-Indian and Indian sources, some of which may be considered sacred information by the people.

United Indians of All Tribes Foundation. *Sharing Our Worlds: Native American Children Today*. Seattle, WA: United Indians of All Tribes Foundation, 1980.
Five Indian children living in Seattle describe their families, their foods, recreation, and values. The children come from families where one parent is Native American and the other may be Filipino, Samoan, Hawaiian, or Portuguese. A well-written book for elementary level that introduces children to the concept of diversity among contemporary, urban American Indians.

Wax, Murray L. *Indian American: Unity and Diversity*. (Ethnic Groups in American Life Series) Englewood Cliffs: Prentice-Hall, 1971.
Sociological view of the contemporary American Indian situation seen in historical perspective.

Special Topics and Culture Areas:

Allen, Paula Gunn. *Spider Woman's Granddaughters: Traditional Tales and Contemporary Writing By Native American Women*. Boston, MA: Fawcett, 1990.

Ashabranner, Brent. *Morning Star, Black Sun: The Northern Cheyenne Indians and the American Energy Crisis*. New York, NY: Dodd Mead, 1982.
The story of the Northern Cheyenne's fight to secure and preserve their land and culture against efforts to develop a coal-mining industry by powerful corporations. This case study is a good example of the complex relationship between the federal government (BIA) and the reservations.

Aveni, Anthony. *Native American Astronomy*. Ann Arbor, MI: Books on Demand, Div. of University Microfilm International, 1977.

Bahti, Tom. *Southwestern Indian Tribes, 1968. Southwestern Indian Ceremonials*, 1982. Flagstaff, AR: K.C. Publications.

Beck, Peggy V., and Walters, A. L. *The Sacred: Ways of Knowledge, Sources of Life*. Tsaile, AZ, Navajo Nation: Navajo Community College, 1977.

Bruchac, Joseph, ed. *New Voices from the Longhouse: An Anthology of Modern Iroquois Literature*. Greenfield Center, NY: The Greenfield Review Press, 1988.
A collection of poems, stories, and essays by contemporary Iroquois, some of whom are not professional writers. A variety of themes are evident including family, the environment, work, and art.

Calloway, Colin G. *Indians of the Northeast*. New York, NY: Facts on File, 1991.
Unlike many books of this kind, it devotes significant space to modern life including U.S. Indian policies, urban Indians, the American Indian Movement, Indian identity, legal status, land claims, hunting and fishing rights, religious freedom, economic development, education, and powwows.

Closs, Michael P., editor. *Native American Mathematics*. Austin: University of Texas Press, 1986.

Culin, Stewart. *Games of the North American Indians*. 2 vols. Lincoln, NE: University of Nebraska Press, 1992. (Originally published as Smithsonian Institution, 24th Annual Report, 1907.)

Feest, Christian F. *The Powhatan Tribes*. (Indians of North America Series). New York, NY: Chelsea House, 1990.

Fichter, George S. *American Indian Music and Musical Instruments*. New York, NY: David McKay Co., 1978.
A description of American Indian music and its place in Indian culture. War chants, hunting songs, lullabies, courting songs, music for curing illness and for sowing crops are among the types discussed. Includes words and melodies for some songs, as well as instructions and diagrams for making a variety of musical instruments.

Foreman, Grant. *The Five Civilized Tribes (Cherokee, Chickasaw, Choctaw, Creek, Seminole)*. Norman: University of Oklahoma Press, 1971.

Fortunate Eagle, Adam. *Alcatraz! Alcatraz! The Indian Occupation of 1969-1971*. Berkeley, CA: Heyday Books, 1992.
An engaging and personal account of the Indian occupation of Alcatraz. The author, one of the organizers of the occupation, describes the events that led up to the takeover, the role of the media, the factionalism that arose among the Indians involved, the removal, and the impact the invasion had on the public's understanding of Indian problems, on government policies regarding Indians, and on the renewal of Indian pride. Black and white photographs.

Fundaburk, Emma Lila. *Sun Circles and Human Hands; The Southeastern Indian's Art and Industries*. Reprint of 1957 ed. Fairhope, AL: American Bicentennial Museum.

Gill, Sam D. *Native American Religions: An Introduction*. (The Religious Life of Man Series) Belmont, CA: Wadsworth Publishing Co., 1982.

Gilliland, Hap, ed., *Teaching the Native American*. Rev. 3rd ed. 1995. Council for Indian Education, 3209 Grand Ave., Billings, MT 59102.

Gordon-McCutchan, R. C. *The Taos Indians and the Battle for Blue Lake*. Santa Fe, NM: Red Crane Books, 1991.
The story of the Taos Pueblo's 64 year battle with the U.S. Government to regain its rights to the sacred Blue Lake and surrounding wilderness. This was the first land claims case settled (1970) in favor of an Indian tribe based on freedom of religion.

Grant, Campbell. *Rock art of the American Indian*. 5th ed. Morristown, NJ: Vista Books.

Green, Rayna. *Women in American Indian Society*. New York, NY: Chelsea House, 1992.
Discusses the traditional roles of women in various American Indian societies and the effects of the European "invasion" upon them.

Hausman, Gerald. *Turtle Island Alphabet: A Lexicon of Native American Symbols and Culture*. New York, NY: St. Martin's Press, 1992.
A collection of American Indian stories and poems. Each letter in the alphabet is represented by an object and theme relevant to American Indian culture (for example, bead, arrow, eagle, fetish), which is described through a combination of text, myth, poetry, and illustrations.

Hillerman, Tony. *The Boy Who Made Dragonfly*. Albuquerque, NM: University of New Mexico Press, 1986. Reprint of 1972 ed.
A retelling of a Zuni legend. Includes notes on the origin of the myth and explanations of the story's meaning in terms of Zuni symbolism and philosophy.

Hirschfelder, Arlene. *Rising Voices: Writings of Young Native Americans*. New York, NY: Charles Scribner's Sons, 1992.
A collection of poems and essays written by young American Indians, organized around the themes of identity, family, homelands, ritual and ceremony, education, and "harsh realities." An excellent source for contemporary material on American Indian youth and their struggle to determine "what it means to be Indian today."

Hudson, Charles. *The Southeastern Indians*. 1st ed. Knoxville: University of Tennessee Press, 1976.
Best single source on the Indians of Southeastern United States comprehensive and readable.

Laubin, Reginald and Gladys Laubin. *American Indian Archery*. (Civilization of American Indian Series) Norman: University of Oklahoma Press, 1991. 1st ed., 1980.

________. *The Indian Tipi: Its History, Construction, and Use*. New York, NY: Ballantine Books, Inc., 1977.

Lowie, Robert H. *Indians of thePplains*. Lincoln, NE: University of Nebraska Press, 1982.
A reliable, popular introduction to Plains culture by the outstanding scholar in this area.

Lurie, Nancy O. *North American Indian Lives*. Prospect Heights, IL: Waveland Press, 1991.
Short biographies of 15 notable Indians including Louis Riel, Wovoka, Chief Joseph, and Sacajawea.

Moerman, Daniel E. *Medicinal Plants of Native America.* 2 vols. (Technical Reports No. 19) Ann Arbor, MI: University of Michigan, Museum of Anthropology, 1986.
A well-illustrated guide to indigenous North American plants and their uses in Native American healing.

Nabokov, Peter, and Easton, Robert. *North American Architecture.* New York, NY: Oxford University Press, 1988.

Niethammer, Carolyn. *Daughters of the Earth: The Lives and Legends of American Indian Women.* New York, NY: Macmillan Publishing Co., 1977.
Based on historical records and recollections of contemporary Indian women. Topics include childbirth, growing up, coming-of-age, marriage, women's economic roles, women and power, and women and war.

Ortiz, Alfonso. *The Tewa World: Space, Time, Being and Becoming in a Pueblo Society.* Chicago: University of Chicago Press, 1972.
The author, a social anthropologist born and raised in the San Juan Pueblo, describes Tewa world view with the authority and sensitivity of a participant.

Oswalt, Wendall H. *This Land Was Theirs: A Study of North American Indians.* 4th ed. Mountain View, CA: Mayfield Publishers, 1987.
Ten tribes representing different geographic areas are described from the time of historic contact to extinction or to modern times.

Reichard, Gladys. *Navajo Religion: A Study of Symbolism.* Reprint of 1963 ed. Ann Arbor, MI: Books on Demand, Div. of University Microfilm International; Princeton, NJ: Priinceton Univ. Press (paper).
A comprehensive, scholarly, and readable study that considers Navajo world view, the nature of man, pantheon, theory of disease, theory of curing, and ritual symbolism.

Reyhner, Jon and Eder, Jeanne. *A History of Indian Education.* Council for Indian Education, 3209 Grand Ave., Billings, MT 59102.

Ruoff, A. Lavonne Brown. *Literatures of the American Indian.* New York, NY: Chelsea House Publishers, 1991.
Describes the oral and written works that comprise the body of American Indian literatures. Comparisons and contrasts between European/American literature and American Indian literature are presented.

________. *American Indian Literatures: An Introduction, Bibliographic Review, and Selected Bibliography.* New York, NY: Modern Language Association of America, 1990.

Strauss, Susan. *Tales From Native America: Coyote Stories for Children*. Hillsboro, OR: Beyond Words Publishing, Inc., 1991.
A collection of four amusing stories about the traditional American Indian trickster character, Coyote. The book attempts to educate the reader about the unique and sacred art of Native American storytelling.

Swanton, John R. *The Indians of the Southeastern United States*. Washington, D.C.: Smithsonian Institution Press, 1979. (Originally published as Smithsonian Institution Bureau of American Ethnology Bulletin 137, 1946.)

Thompson, Stith. *Tales of North American Indians*. Bloomington: Indiana University Press, 1966.

Underhill, Ruth. *Red Man's Religion: Beliefs and Practices of the Indians of North America*. Chicago: University of Chicago Press, 1972.
A companion volume to Underhill's *Red Mans America* (see student bibliography). The approach is cross cultural, summarizing Indian beliefs, ceremonies, and religious practices throughout the continent. (Also for students.)

Vogel, Virgil. *American Indian Medicine*. Norman: University of Oklahoma Press, 1990.

Waldorf, D. C. *The Art of Flintknapping*. Published by D. C. Waldorf and Valerie Waldorf, 1984. Available through Mound Builder Art and Trading Co., Box 702, Branson, MO 65616.

Waters, Frank. *Masked Gods: Navajo and Pueblo Ceremonialism*. Ohio University Press, 1950.

________. *Book of the Hopi*. New York: Viking Penguin, 1977.
Thirty elders of the Hopi Indian tribe talk about their creation myth, legends, ceremonial cycles and their history.

Wheeler, Jordan. *Brother in Arms*. Winnipeg, Manitoba: Pemmican Publications, Inc., 1989.
Three beautifully written novellas focusing on the theme of brotherhood, among families and among Native peoples. Set in present-day Canada, the stories portray Native characters coping with personal problems as the death of a parent, a terminal illness, and dealing with the complex struggle of being Native in a White society.

STUDENT BIBLIOGRAPHY

North American Indians

Two new excellent published series now available are:

Indians of North America, General Editor Frank W. Porter III. Chelsea House Publishers, Broomall, PA. Over 50 titles available on American Indian tribes as well as on specific topics such as The

Archaeology of North America and Literatures of the American Indian, written by scholars. For a catalog, write: Chelsea House Publishers, Dept. CB2, P.O. Box 914, 1974 Sproul Rd., Suite 400, Broomall, PA 19008-0914. Also Chelsea House Publishers' Junior Library of American Indians.

Alvin Josephy's Biographical Series on American Indians. Englewood Cliffs, NJ: SilverBurdett Press. Alvin Josephy, a noted historian, introduces each biography by explaining the purpose of the series, which is to help the reader understand how the Indians looked at the world.

Alexander, Bryan and Cherry. *An Eskimo Family*. Minneapolis, MN: Lerner Publications Co., 1985. Reprint of UK 1979 ed.
A contemporary 15 year-old Eskimo boy describes daily life in his village in Greenland over the course of a year. Color photographs. Elementary level.

Avery, Susan, and Skinner, Linda. *Extraordinary American Indians*. Chicago, IL: Children's Press, 1992.
Short biographies of several dozen prominent American Indians, organized chronologically from the 18th century to the present. This unique book includes contemporary American Indians noted for their work in education, the arts, politics, law, and sports. Includes a lengthy bibliography and suggests videotapes.

Balikci, Asen. *The Netsilik Eskimo*. Rev. ed. Prospect Heights, IL: Waveland Press, 1989.
Richly illustrated description of the Netsilik Eskimo living in the Pelly Bay region of Canada. Good background for the Netsilik Eskimo series of films. (see film section)

Baylor, Byrd. *Yes Is Better Than No*. New York, NY: Treasure Chest, 1991. Reprint of 1977 ed.
An engaging story about the problems faced by Papago Indians living in a ghetto in contemporary Tucson. The Papago perspective of nonsensical bureaucratic regulations in humorously depicted, and problems such as alcoholism, welfare-dependence, and single parent households are compassionately described in this unique work.

Borland, Hal. *When the Legends Die*. New York, NY: Bantam Books, Inc., 1984.
A story about a mute Indian, his life in the mountains, at a reservation school, as a rodeo rider and then as an adult. (jr.h.)

Braun, Esther K. and Braun, David P. *The First Peoples of the Northeast*. Lincoln Historical Society, P.O. Box 6084, Lincoln Center, MA 01773-6084.
An introduction to the geography and original peoples of New England, New York and the Canadian eastern province. A good introduction to archaeology, heavily illustrated with maps, photographs, and drawings.

Chance, Norman A. *The Eskimo of North Alaska*. (Case Studies in Cultural Anthropology) Orlando, FL: Harcourt, Brace, Jovanovich, 1966.
Ethnography focusing on changing patterns and conflicts on contemporary Eskimo life. (H.S.)

Craven, Margaret. *I Heard the Owl Call My Name*. Dell, 1980.
A novel about traditional Kwakiutl Indian life and beliefs and the impact of outside technology and education. (Jr. & H.S.)

Downs, James P. *The Navajo*. Prospect Heights, IL: Waveland Press, 1984.
This book focuses on the pastoral aspects of this sheepherding society pointing out the importance of females, the inviolability of the individual, the prestige of age, and the reciprocity principle.

Dozier, Edward P. *The Pueblo Indians of North America*. Prospect Heights, IL: Waveland Press, 1983.
Dozier is a native of Santa Clara Pueblo, New Mexico and an anthropologist. This case study on the Pueblo Indians is about a group of related peoples and their adaptation through time to their changing physical, socioeconomic, and political environments. It includes excellent sections on health and medicine, Katchina cults, world view, and symbolism.

Eastman, Charles A. *Indian Boyhood*. Lincoln: University of Nebraska Press (Bison Books), 1991, 1971.
Autobiographical reminiscences of the first 15 years of a young Sioux living on the plains in the 1870's and 1880's when traditional lifeways were still intact. Eastman describes his training, family traditions, tribal ceremonies, and legends.

Erdoes, Richard. *Crying for a Dream: the World Through Native American Eyes*. Santa Fe, NM: Bear & Co., 1989.

Folsom, Franklin. *Red Power on the Rio Grande, The Native American Revolution of 1680*. Billings, MT: Council for Indian Education, 1989.
Describes the Pueblo uprising against the government of Spain in 1680 with the Pueblo Indian perspective.

Freedman, Russell. *Indian Chiefs*. New York, NY: Holiday House, 1987.
Biographies of six chiefs: Red Cloud (Oglala Sioux), Quanah Parker (Comanche), Washakie (Shoshone), Joseph (Nez Perce), Satanta (Kiowa), and Sitting Bull (Hunkpapa Sioux). Well-illustrated with archival photographs.

Fritz, Jean. *The Double Life of Pocahontas*. New York, NY: Puffin Books, 1987.
In this fictionalized account of Pocahontas' life, the author presents more probable explanations of events accepted by scholars. For example, what Captain John Smith perceived as his imminent execution may actually have been a ceremony that would have made him an adopted member of the tribe. This has led to the popular legend that Pocahantas saved Smith's life.

George, Jean C. *Julie of the Wolves*. Harper Collins Child Books, 1972.
Story of a 13 year-old Eskimo girl caught between the old ways and those of the Whites, between childhood and womanhood. (Jr.H)

George, Jean C. *Water Sky*. New York, NY: Harper C Child Books, 1989.
An upper class New England teenager goes to Barrow, Alaska to join an Eskimo whaling crew in the hope of find his uncle. He confronts many complex issues such as racism, Eskimo whaling rights, and Alaskan youth balancing traditional and modern Inupiat culture. Includes an Inupiat glossary and pronunciation guide.

Hoebel, Edward Adamson. *The Cheyennes: Indians of the Great Plains*. 2nd ed. Orlando, FL: Harcourt, Brace, Jovanovich College Pubn., 1978.
A sympathetic account of the Cheyennes. Discusses ritual and tribal integration, social structure, world view, and Cheyenne personality. (H.S.)

Houston, James. *The White Dawn: An Eskimo Saga*. San Diego, CA: Harcourt, Brace, Jovanovich, 1989.
A dramatic novel about the Canadian Eskimo with good ethnographic detail.

Hoyt-Goldsmith, Diane. *Cherokee Summer*. NY: Holiday House, 1993.

________. *Pueblo Storyteller*. New York, NY: Holiday House, 1991.
A 10 year-old girl relates the Cochiti Pueblo traditions she is learning from her extended family. Color photographs.

________. *Totem Pole*. New York, NY: Holiday House, 1990.
A modern Tsimshian boy narrates how his father, a noted Northwest Coast woodcarver, creates a totem pole for a local tribe. Color photographs.

Jenness, Aylette, and Rivers, Alice. *Two Worlds: A Yup'ik Eskimo Family*. Boston, MA: Houghton Mifflin, 1989.
A contemporary story of the daily life of a Yup'ik Eskimo family in a small Alaskan town on the Bering Sea, co-authored with a Yup'ik woman.

Kawano, Kenji, photographer. *Warriors: Navajo Code Talkers*. Flagstaff, AZ: Northland Publishing Co., 1990.
A collection of photographs of the World War II Navajo Code Talkers from the 1970s and 1980s, accompanied by brief quotes about the individual's war experiences.

Keegan, Marcia. *The Taos Pueblo and Its Sacred Blue Lake*. Santa Fe, NM: Clear Light Publishers, 1991.
The Taos Indians attempts to resist Spanish then United States control of their sacred Blue Lake and their eventual victory. Black and white photographs of Taos Pueblo and people.

Keegan, Marcia. *Pueblo Boy, Growing Up in Two Worlds*. New York, NY: Dutton Child Books, 1991.
Describes the daily life of Timmy, a young San Ildefonso Pueblo boy, and how he straddles the modern world of computers and Walkmans and the traditional world of his people. Full color photographs. (lower elementary)

Kroeber, Theodora. *Ishi, Last of His Tribe*. Bantam, 1973.
Moving story of a California Indian, sole survivor of the Stone Age, who entered the 20th century at the age of 50. Gives good historical background on the relationships and conflicts between the settlers and the California Indians. (H.S.)

Liptak, Karen. *North American Indian Medicine People*. (First Books) New York, NY: Franklin Watts, 1990.
This easy-to-read book explores traditional American Indian medicine people and healing practices. Illustrated with color and black and white photographs and paintings.

Liptak, Karen. *Indians of the Southwest*. (The First American Ser.) New York, NY: Facts on File, 1991.
Good overview of Southwest Indian history, lifeways, ritual and religion, and the changes brought by contact with the Spanish, and later with reservation life.

Mancini, Richard E. *Indians of the Southeast*. (The First American Ser.) New York, NY: Facts on File, Inc., 1992.
An overview of the diversity of the traditional cultures of the Southeastern tribes with a discussion on the impact of contact and tribal efforts to preserve their cultures.

McFee, Malcolm. *Modern Blackfeet: Montanans on a Reservation*. Prospect Heights: Waveland Press, 1984.
Emphasizing individual differences, McFee examines White-oriented form of adaptation and Indian-oriented adaption.

Momaday, N. Scott. *Owl in the Cedar Tree*. Lincoln: University of Nebraska Press, 1965.
A young Navajo boy lives with his parents and his grandfather who represent modern and traditional views of life, respectively. He learns how he can contribute to both worlds.

Monroe, Jean Guard, and Williamson, Ray A. *They Dance in the Sky: Native American Star Myths*. Boston: Houghton Mifflin Co., 1987.
A well-documented presentation of American Indian star myths.

Neihardt, John G. *Black Elk Speaks*. Lincoln: University of Nebraska Press, 1979.
Book of visions of a Plains Indian spiritual leader.

O'Dell, Scott. *Sing Down the Moon*. New York, NY: Dell Publishing Co., 1976.
A poignant first-person story about Navaho life in the mid-1860's when they migrated against their will from their original homeland in Arizona to Fort Sumner, New Mexico. Includes descriptions of traditional rites-of-passage. (jr.h.)

Porter, Frank W., III, general editor. *Indians of North America* series. Chelsea House Publishers, Dept. WP3, P.O. Box 914, 1974 Sproul Rd., Suite 400, Broomall, PA 19008-0914. Some of the books published thus far cover the Seminole, Cherokee, Crow, and Cheyenne.

Porter, Frank W. III. *Maryland Indians: Yesterday and Today*. Baltimore, MD: The Maryland Historical Society, 1983.

Shemie, Bonnie. *Houses of Snow, Skin and Bone: Native Dwellings of the Far North*, 1989. Also, *Houses of Bark: Tipi, Wigwam and Longhouse*, 1989, and *Houses of Hide and Earth*, 1991. Plattsburgh, NY: Tundra Books.

Sherrow, Victoria. *Indians of the Plateau and Great Basin*. New York, NY: Facts on File, 1992. Well-written account of tribal roots, lifeways, rituals, and history of the Indian tribes of the Plateau and Great Basin. A section on tribes today is included.

Stein, R. Conrad. *The Story of the Trail of Tears*. Chicago, IL: Children's Press, 1985. (upper elementary)

Underhill, Ruth. *Red Man's America: A History of Indians in the United States*. Rev. ed. Chicago: Univ. of Chicago Press, 1971.
A good, readable introduction to North American Indians with useful areal summaries. (H.S.)

Wood, Ted, with Wanbli Numpa Afraid of Hawk. *A Boy Becomes a Man at Wounded Knee*. New York, NY: Walker and Company, 1992.
A moving, first-person account by a nine-year-old Lakota boy accompanying more than 200 people on a reenactment of the journey made by Chief Big Foot and the Lakota from the Cheyenne River to the site of the Battle of Wounded Knee in 1890. Fine color illustrations. (elementary)

Yue, Charlotte and David. *The Igloo*, 1988. *The Pueblo*, 1986. Boston, MA: Houghton, Mifflin.
This book focuses not only on the igloo but also on the Arctic environment, traditional Eskimo clothing, food, games, transportation, family, and community life. (elementary/secondary)

________. *The Tipi: A Center of Native American Life*. New York, NY: Alfred A. Knopf Books for Young Readers, 1984.

The following is a selected list of American Indian autobiographies and oral histories. A lengthier bibliography on American Indian women is available from the Department of Anthropology.

Blackman, Margaret. *Sadie Brower Neakok, An Inupiaq Woman*. Seattle: University of Washington Press, 1989.

________. *During my Time: Florence Edenshaw Davidson, A Haida Woman*. Seattle: University of Washington Press, 1982.

Canfield, Gae. W. *Sarah Winnemucca of the Northern Paiutes*. Norman, OK: University of Oklahoma Press, 1988.

Crow Dog, Mary, and Erdoes, Richard. *Lakota Woman*. New York, NY: Grove-Weidenfeld, 1990. Contemporary account of reservation life, Indian politics, traditional tribal ways, and growing up Sioux in the 1960s, 70s, and 80s. Her subsequent autobiography is titled OHITAKA WOMAN under the name Mary Brave Bird (NY: Grove Press, 1993).

Eastman, Charles A. *From the Deep Woods to Civilization: Chapters in the Autobiography Of an Indian*. Lincoln: University of Nebraska Press, 1977.

French, Alice. *The Restless Nomad*. Winnipeg, Manitoba: Pemmican Publishers, 1991. An autobiography of an Inuit woman whose family is from the Mackenzie Delta district of Arctic Canada. Her story reveals the challenges faced by Native people adapting to a rapidly changing environment.

La Flesche, Francis. *The Middle Five, Indian Schoolboys of the Omaha Tribe*. Lincoln: University of Nebraska Press, 1978.

Linderman, Frank B. *Plenty-Coups, Chief of the Crows*. Lincoln: University of Nebraska Press, 1962. *Pretty-Shield, Medicine Women of the Crows*. 1974.

Mankiller, Wilma and Wallis, Michael. *Mankiller: A Chief and Her People*. New York: St. Martin's Press, 1993.

Momaday, N. Scott. *The Names: A Memoir*. Tucson, AZ: University of Arizona Press, 1976. An autobiographical narrative by a Kiowa novelist and poet.

Neihardt, John G. *When the Tree Flowered: The Story of Eagle Voice, A Sioux Indian*. Lincoln: Univ. of Nebraska Press, 1991.

Neihardt, John G. *Black Elk Speaks*. Lincoln: University of Nebraska Press, 1979.

Shorto, Russell. *Geronimo and the Struggle for Apache Freedom*. (Alviin Josephy's Biography of the American Indiana Ser.) Englewood Cliffs, NJ: Silver Burdett Press, 1989. The story of the Apache wars and Geronimo's attempt to keep his people together despite encroaching European settlers. (elementary/secondary)

Udall, Louise. *Me and Mine: The Life Story of Helen Sekaquaptewa, as Told to Louise Udall*. Tucson: University of Arizona Press, 1969. The life story of a Hopi women.

TEACHING KITS AND OTHER MATERIALS

Teaching Kits and Curricula:
TEACHING ABOUT NATIVE AMERICANS. National Council for the Social Studies, Bulletin No. 84, 1990. National Council for the Social Studies, 3501 Newark St., N.W., Washington, D.C. 20016-3167; (202) 966-7840. $10.95 (soft cover)

Lesson plans cover the following topics: environment and resources, culture and diversity, change and adaptation, conflict and discrimination, and current issues for Native Americans. The last section, "Resources for Teachers and Students," includes criteria for evaluation educational materials and an "Indian Awareness Inventory" of 40 true or false questions.

THE NATIVE PEOPLE OF THE NORTHEAST WOODLANDS. An elementary curriculum produced by the National Museum of the American Indian, 1989. National Museum of the American Indian, Broadway at 155th St., New York, NY 10031; (212) 283-2420. $35.00

The Delaware (Lenape) and the Six Nations Iroquois are the focus of this curriculum in a three-ring binder notebook. Forty-seven classroom activities are found in lesson plans whose topics are: cultural diversity and environment, early times, language, hunting and fishing, harvest, family, oral traditions, clothing, government, life today. A resource section provides information on publications, audio-visuals, powwows, Native American supplies, and governments today.

KEEPERS OF THE EARTH: NATIVE AMERICAN STORIES AND ENVIRONMENTAL ACTIVITIES FOR CHILDREN by Michael J. Caduto and Joseph Bruchac, 1989. Fulcrum Publishing, Golden, Colorado. $19.95 (hard cover). Special discounts available. Teacher's Guide also available. Primarily for first through sixth grade.

Winner of the New York State Outdoor Education Association Annual Art and Literary Award (1990), this book combines Native American stories and environmental education activities to help students understand all aspects of the earth and to teach "positive social and environmental skills."

THE NATIVE AMERICAN SOURCEBOOK: A TEACHER'S RESOURCE OF NEW ENGLAND NATIVE PEOPLES by Barbara Robinson. Concord Museum, P.O. Box 146, Concord, MA 01742. Grades 1 & 2. $15 plus $3 postage and handling.

The sourcebook contains curriculum materials, teacher's guides, background information, activity sheets, extensive bibliography, and resource listing.

THE WABANAKIS OF MAINE AND THE MARITIMES. A resource book about Penobscot, Passamaquoddy, Maliseet, Micmac, and Abenaki Indians. By the American Friends Service Committee, 1989. Grades 4 through 8. American Friends Service Committee, 1501 Cherry St., Philadelphia, PA 19102-1479. $17.00; $20.00 Canada.

This 506 page resource manual covers the history of the Wabanaki, their government and politics, land and treaties, effects of the American Revolution, Indian-White relations, and contemporary life. Also included are 180 pages of lesson plans relating to the subject topics and readings of Wabanaki legends, stories from or about different periods in history from 1400 to the 1920's, and interviews with Wabanaki people today. The section, "Fact Sheets," covers information about material culture, political, social, and spiritual life, and games and crafts "to try." Also included are a resource listing and a bibliography.

The following distributors have films available on American Indians and Alaskan Natives:

Documentary Educational Resources
101 Morse St.
Watertown, MA 02172 (617) 926-0491

Pennsylvania State University
Audio Visual Services, Special Services Bldg.
1127 Fox Hill Rd.
University Park, PA 16803-1824 (814) 863-3103

UC Berkeley Extension
Center for Media and Independent Learning
2000 Center St., 4th Floor
Berkeley, CA 94704 (510) 642-0460

National Film Board
The Canadian Embassy
1746 Massachusetts Ave., N.W.
Washington, D.C. 20036

Native American Public Broadcasting Consortium, Inc.,
P. O. Box 83111
Lincoln, NE 68501
(402) 472-3522.

In addition to the above distributors, the Smithsonian Institution's National Museum of the American Indian publishes Native Americans on Film and Video. Write or call:

The National Museum of the American Indian
Film and Video Department
George Gustave Heye Center.
1 Bowling Green
New York, NY 10004
(212) 283-2420.

Below are listed only films which can be highly recommended for junior high and high school students.

Prehistory/Archeology:

THE ODYSSEY SERIES. (DER) (annotations from ODYSSEY)

The Chaco Legacy. 59 min. 1980. (DER)

> "Over 900 years ago the inhabitants of Chaco Canyon, New Mexico, undertook one of the most comprehensive building projects ever -- an extensive water- control system, a network of roads connecting 70 Pueblos, and several mammoth structures such as the 800-room Pueblo Bonito. How and why these people developed such a sophisticated technology is only now becoming clear after 50 years of study."

Myths and the Moundbuilders. 59 min. 1981. (DER)

> "Centuries before the Spanish and French explored the Mississippi, American Indians along the vast interior river system had constructed huge earth mounds for burying and honoring their dead and for use as ceremonial centers. Myths about the moundbuilders abounded in the 19th century. But over the last 100 years researchers have begun to look closely at the mounds for clues to the prehistoric American who built them..."

Seeking the First Americans. 59 min. 1980. (DER)

> "Archeologists from Texas to Alaska search for clues to identify of the first people to tread the American continent -- the early hunters who between 11,000 and 50,000 years ago crossed the Bearing Strait in Pursuit of game."

4 - Butte - 1: A Lesson in Archaeology. 33 min. 1968. (Penn)

> Detailed excavation of a Maidu Indian village in California by a group of U.C.L.A. Faculty and students. Visually an exciting film to view.

Eskimo/Inuit:

The Alaskan Eskimo. (Alaska Native Heritage Film Project) Available from DER

> Four films, now on video, documenting contemporary Alaskan Eskimo life, the integration of the new into the old. The films were made in the 1970's with the cooperation of the villages filmed.
>
> At the Time of Whaling. color. 38 min.
> From the First People. color. 45 min.
> On the Spring Ice. color. 45 min.
> Tununeremuit: The People of Tununak. color. 35 min.

Netsilik Eskimo Series (Penn)

> A series of fine ethnographic films made in the 1960's as part of the school curriculum, Man, A Course of Study. The Netsilik Eskimo live in the Pelly Bay region of Northern Canada, and the

films recreate life as it was in the early 20th century before major acculturation. The films have little narration, the action and natural sounds conveying the details of the scene. Emphasis is on the ecological adaptation and subsistence modes of the Netsilik. All films are in color and are 30 minutes each.

At the Winter Sea-Ice Camp: Parts 1-4 (midwinter)
At the Spring Sea-Ice Camp: Parts 1-3 (late winter)
Jigging for Lake Trout (late winter)
Stalking Seal on the Spring Ice: Parts 1-2 (spring)
Group Hunting on the Spring Ice: Parts 1-3 (spring)
Building a Kayak: Parts 1-2 (early summer)
Fishing at the Stone Weir: Parts 1-2 (midsummer)
At the Caribou Crossing Place: Parts 1-2 (early autumn)
At the Autumn River Camp: Parts 1-2 (late autumn)

Nanook of the North. 51 min. b/w. 1922. (Penn) 65 min. b/w. 1976, rev. ed.
Classic ethnographic documentary by Robert Flaberty. Biographical film of one family. Dramatic and visual account of their seasonal round, communal life, and dependency on the environment. Revised edition made with musical score. Both excellent for classroom use.

Village of no River. 50 min. color. 1981. (Distributed by The Newark Museum, 49 Washington St., P.O. Box 540, Newark, NJ 07101.)

Film tells the story of a small Alaskan Eskimo Village of Kwigillingok and its people.

The Living Stone. 22 min. color. (Distributed by New York University Film Library, 26 Washington Place, New York, NY 10003.)

"An evocative picture of a spring and summer among a few Eskimo at Cape Dorset in Canada's eastern Arctic, showing the inspiration, often related to belief in the supernatural, behind their stone, ivory and bone carvings."

Eskimo Artist: Kenojuak. 20 min. (Penn)
Beautifully told story of Kenojuak, a Cape Dorset artist, whose words tell the poetic story of her life and art.

Subarctic:

Glooscap. 12 min. color. (NFB)
Beautiful visualization of the MicMac creation myth.

Paddle to the Sea. 28 min. color. (NFB)
Re-creation of the classic story of the journey of a carved Indian canoe from the headwaters of the St. Lawrence River to the sea.

Northeast:

Cree Hunters of Mistassini. 88 min; 59 min. version in film & video (DER)

Documentary on the subsistence hunting culture of the Cree Indians in James Bay area of Quebec. Follows three families on their hunting trip, and illustrates some of the conflicts between the old and the new ways.

Our Lives in our Hands. 49 min. color (DER)

This documentary examines split ash basketmaking as a means of economic and cultural survival for the Micmac Indians of northern Maine. This documentary of rural off-reservation Indian artisans aims at breaking down stereotypical images. First person commentaries are augmented by authentic 17th century Micmac music.

Northwest Coast:

The Loon's Necklace. 11 min. color. (Penn)

Dramatization of an Indian legend showing the Indians' sensitivity to the moods of nature.

Crooked Beak of Heaven. 52 min. color. (UCEMC) (part of The Tribal Eye Series)

A view of traditional ceremonies of the Gitskan, Haida, and Kwakiutl Indians of the Northwest Coast.

Box of Treasures. 28 min. color film & video (DER)

"In 1921 the Kwakiutl people of Alert Bay, British Columbia, held their last secret potlatch. Half a century later the splendid masks, blankets, and copper heirlooms that had been confiscated by the Canadian government were returned. The Kwakiutl built a cultural center to house these treasures and named it u'mista, 'something of great value that has come back.' This film is eloquent testimony to the persistence and complexity of Kwakiutl society today...."

Southwest:

Dinshyin. 22 min. (UCEMC)

Ethnographic narrative describing the many peoples who have lived in northwestern Arizona, especially the Navajo. Use of art to illustrate the myths and legends integral to the history of Canyon de Chelly and Mesa Verde.

Dineh: Portrait of the Navajo. 77 min. (UCEMC)

Film contrasts traditional Navajo life, family structure, and values with today's land disputes; entire narration by Navajos themselves.

Hopi. 58 min. (Distributed by Wayne Ewing Films, Box 32269, Washington, D.C. 20007.)

Excellent film focusing on contemporary problems as well as traditional life.

California:

Ishi in Two Worlds. 19 min. (Penn)

Story of Ishi, chief and last survivor of the Yahi tribe in California. Film is made from still photographs -- good to use with book by Theodora Kroeber (see student bibliography).

Modern Conditions:

Indian Self-Rule: A Problem of History. 58 min. videocassette (DER)

"The Indians of North America own less than 2% of the land first settle by their ancestors. This video traces the history of White-Indian relations from 19th century treaties through the present, as tribal leaders, historians, teachers, and other Indians gather at a 1983 conference organized to reevaluate the significance of the Indian Reorganization Act of 1934. The experience of the Flathead National of Montana, the Navajo Nation of the Southwest, and Quinault people of the Olympic Peninsula illustrate some of the ways Indians have dealt with shifting demands imposed upon them, from allotment to reorganization to termination and relocation. Particularly eloquent are Indian reflections upon the difficulties of maintaining cultural identities in a changing world and within a larger society that view Indians with ambivalence."

ANTHROPOLOGY OUTREACH OFFICE
NATIONAL MUSEUM OF NATURAL HISTORY
SMITHSONIAN INSTITUTION

28

Information from the

National Museum of Natural History
SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

GROWING UP IN NON-WESTERN SOCIETIES

Bibliographies for Teachers and Students
Films, Museum Activities, Classroom
Activities & Other Teaching Materials

TEACHER BIBLIOGRAPHY

General Books:

Benedict, Ruth. THE CHRYSANTHEMUM AND THE SWORD. New American Library, 1967.

While ignoring problems of sampling and of individual or sub-cultural variability, this anthropological classic does confirm consistency between child-training practices in Japan and requirements of adult culture.

Fried, Martha Nemes and Morton H. Fried. TRANSITIONS: FOUR RITUALS IN EIGHT CULTURES. New York: W.W. Norton & Co., 1980.

Using the San, the Muslim Hausa, Soviet Union, Tlingit, Tikopia, Cuba, China, and Taiwan, the authors focus on the rituals in birth, puberty, marriage, and death. A highly readable and enlightening book that closely examines crisis rituals to show how people function and often why they function as they do.

Fuchs, Estelle, ed. YOUTH IN A CHANGING WORLD: CROSS CULTURAL PERSPECTIVES ON ADOLESCENCE. Mouton/Beresford Book Service, 1976.

A stimulating collection of conference papers on adolescence by anthropologists, sociologists, and psychologists.

Gennep, Arnold Van. THE RITES OF PASSAGE. Chicago: Univ. of Chicago Press, 1960.

An important source for theoretical analysis of "life crises."

Goodale, Jane C. TIWI WIVES: A STUDY OF THE WOMEN OF MELVILLE ISLAND, NORTH AUSTRALIA. Seattle: Univ. of Washington Press, 1971, 1980.

The book discusses the life of Tiwi women from birth to death.

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Goode, William J. WORLD REVOLUTION AND FAMILY PATTERNS. New York: The Free Press, 1970.

Describes and interprets main changes in family patterns that have occurred over the past 50 years in Japan, China, India, the West, Sub-Saharan Africa, and Arab countries.

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Examines growing up in eight cultures.

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An edited collection of articles. See Harrington, Charles, and Whiting, John W.M. "Socialization Process and Personality."

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The book compares the birthing systems from Yucatan, Holland, Sweden, and the U.S.A., explaining the relationship of birthing practices to values. The author is critical of traditional U.S.A. obstetric practices.

Kitzinger, Sheila. WOMEN AS MOTHERS. New York: Random House, 1978, 1979.

Using perspectives of cultural anthropology, the author examines birth and motherhood in different cultures and historical periods.

Mayer, Philip, ed. SOCIALIZATION: THE APPROACH FROM SOCIAL ANTHROPOLOGY. London: Tavistock, 1970.

Essays by various authors on current approaches to socialization.

Mead, Margaret. GROWING UP IN NEW GUINEA. New York: Blue Ribbon Books, 1930. Morrow, 1976.

A study of the Manus people that concentrates on child-rearing practices and education of young people. (Also for high school students)

Mead, Margaret. COMING OF AGE IN SAMOA. New York: Peter Smith. Originally published in 1928, seventh printing 1973.

Anthropological classic that is a psychological study of adolescence in Samoan society. Includes some comparison with adolescence in America. (Also for high school students)

Middleton, John, ed. FROM CHILD TO ADULT: STUDIES IN THE ANTHROPOLOGY OF EDUCATION. New York: The Natural History Press, 1970.

This collection of essays places our educational system within a wider, comparative perspective. In studying education the processes of maturation both physical and social are examined. The societies covered in the book range from Taleland and Tikopia to the Hopi, Chaga, and Guatemalans.

Minturn, Leigh and William W. Lambert. MOTHERS OF SIX CULTURES: ANTECEDENTS OF CHILD REARING. New York: John Wiley and Sons, Inc., 1964.

Focus is on the mothers from the same cultures as in SIX CULTURES.

Montagu, Ashley, ed. LEARNING NON-AGGRESSION: THE EXPERIENCE OF NON-LITERATE SOCIETIES. Oxford: Oxford Univ. Press, 1978.

This collection of articles explores the relationship between child-rearing practices and aggressive behavior among the Fore, !Kung, Inuit, Semai, Aboriginal Australians, Mbuti pygmies, and Tahitians.

Sutton-Smith, Brian. THE FOLKGAMES OF CHILDREN. Austin: Univ. of Texas Press, 1972.

This volume of essays includes one essay on games played in New Zealand with descriptions of each game and analysis of changes in children's choices of games from the late 19th century to the present. A second essay analyses sixty years of change in American children's games. Also see by the same author FOLK STORIES OF CHILDREN. (American Folklore Society Series.) Univ. of Pennsylvania press, 1980.

Whiting, Beatrice B. SIX CULTURES: STUDIES IN CHILD REARING. New York: John Wiley and Sons, Inc., 1963.

Explores cross-culturally the relation between different patterns of child rearing and subsequent differences in personality. Research from Nyansongo in Kenya, Rajputs in India, Taira in Okinawa, Mixtecans in Mexico, Tarong in Philippines and New Englanders in U.S.A.

Whiting, Beatrice B. CHILDREN OF SIX CULTURES: A PSYCHO-CULTURAL ANALYSIS. Boston: Harvard Univ. Press, 1979.

Focuses on the children from the same cultures as in SIX CULTURES.

Whiting, John W., Irvin L. Child, and William Lambert. FIELD GUIDE FOR A STUDY OF SOCIALIZATION. New York: John Wiley and Sons, Inc., 1966 (For background read Whiting, John W.M. and Irving L. Child. CHILD TRAINING AND PERSONALITY: A CROSS CULTURAL STUDY. New Haven: Yale Univ. Press 1953, Greenwood, 1984.)

The book describes appropriate techniques and sample interview questions.

Books on Socialization in Africa:

Achebe, Chinua. ARROW OF GOD: A NOVEL OF AN OLD NIGERIA AND A NEW COLONIALISM. New York: Doubleday, 1969.

One of Africa's best known writers describes the struggle between tradition and British colonial authority through the personal conflicts between an Ibo chief priest and his son.

Clignet, Remi. "Urbanization and Family Structure in the Ivory Coast," In URBAN LIFE: READINGS IN URBAN ANTHROPOLOGY, George Gmelch and Walter P. Zenner, eds. New York: St. Martins Press, 1980, pp. 176-189.

How does urbanization affect peoples whose native cultures prescribe family systems that differ radically from the one most common in the West? The author tries to answer the question by comparing two ethnic groups who live in one Ivory Coast city. One group has a matrilineal system, the other a patrilineal system.

Deng, Francis Mading. THE DINKA OF THE SUDAN. New York: Holt, Rinehart and Winston, 1972, Waveland Press, 1984.

As a Dinka, Deng discusses the growing up process from birth to death in great detail, as well as the present effects of colonialism and civil war, the impact of the modern educational system, and tensions between northern and southern groups.

Fox, Lorene K., ed. EAST AFRICAN CHILDHOOD. N.Y.: Oxford Univ. Press, 1967.

Three excellent descriptions of their own childhood by people from Kenya and Uganda.

Gibbs, James Lowell, Jr., ed. PEOPLES OF AFRICA: CULTURES OF AFRICA SOUTH OF THE SAHARA. Waveland Press, 1988.

A good introduction to the peoples and cultures of sub-Saharan Africa. Focuses on the Ibo, Ganda, Ipelle, !Kung, Somali, Fulani, Suku, Swazi, and Yoruba.

Kenyatta, Jomo. FACING MOUNT KENYA: THE TRIBAL LIFE OF THE KIKUYU. New York: AMS Press, 1976 and Random House, 1962.

The Kikuyu are one of the few societies that have female initiation rites. Kenyatta, an anthropologist and later President of Kenya, describes the rituals involved and the associated attitudes and education.

Langley, Myrtle S. THE NANDI OF KENYA: LIFE CRISIS RITUALS IN A PERIOD OF CHANGE. New York: St. Martin's Press, 1979.

The work focuses on male initiation, female initiation, marriage, divorce, ritual symbolism, and ritual change.

Parkin, David J. PALMS, WINE, AND WITNESSES: PUBLIC SPIRIT AND PRIVATE GAIN IN AN AFRICAN FARMING COMMUNITY. San Francisco: Chandler Publ. Co., 1972.

A study of the economic development of the Giriama in Kenya. Includes chapters on the power of the elders and the strengthening of the customs of bride-wealth and funerals.

Read, Margaret. CHILDREN OF THEIR FATHERS: GROWING UP AMONG THE NGONI OF MALAWI. New York: Holt, Rinehart, and Winston, 1968, Irvington, 1982.

The author emphasizes the rituals and formal educational training by the family and community of a child from birth to adulthood. The book also includes two chapters on urban life and change. Very readable and coherent approach.

Saitoti, Tapilit Ole. "Warriors of Maasailand," NATURAL HISTORY 89(8): 42-55 (August 1980). The book is MAASAI published by Harry N. Abrams, Inc., 1980.

A Maasai vividly describes the rites of passage for males in his society. Beautiful pictures.

Schaffer, Matthew and Christine J. Cooper. MANDINKO: FOCUS ON PAKAO. New York: Holt, Rinehart, and Winston, 1980. Also MANDINKO: THE ETHNOGRAPHY OF A WEST AFRICAN HOLY LAND. Waveland Press, 1987.

An enthnography of an Islamic influenced West African group, including sections on male initiation rites.

Schnedier, Harold K. THE AFRICANS: AN ETHNOLOGICAL ACCOUNT. Englewood Cliffs, N.J.: Prentice-Hall, Inc., 1981.

Within an economic orientation, the book corrects stereotypes and provides some of the latest information on material economics, kinship, power and authority, and religion and philosophy.

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A study of college-educated women ages 20-35 living in Zambia. Schuster focuses on their education, family organization, and effect of colonialism on attitudes toward marriage and sex roles.

!KUNG:

Draper, Patricia. "!Kung Women: Contrasts in Sexual Egalitarianism in the Foraging and Sedentary Contexts," In TOWARD AN ANTHROPOLOGY OF WOMEN, R., ed., pp. 77-109. New York: Monthly Review Press, 1976.

Lee, Richard and Irving DeVore. KALAHARI HUNTERS AND GATHERERS: STUDIES OF THE !KUNG SAN AND THEIR NEIGHBORS. Cambridge: Harvard Univ. Press, 1976.

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Lee, Richard B. THE DOBE !KUNG. (Case Studies in Cultural Anthropology Series.) Holt, Rinehart, and Winston, 1984.

____________. THE !KUNG SAN: MEN, WOMEN AND WORK IN A FORAGING SOCIETY. Cambridge Univ. Press, 1979.

The most complete ethnography of the !Kung, principally a work for teachers. Comprehensive bibliography included.

Marshall, Lorna. THE !KUNG OF NYAE NYAE. Cambridge: Harvard Univ. Press, 1976.

Extensive description of the !Kung based on her and her family's expeditions into the Kalahari Desert to conduct Bushman studies in Nairobi in the 1950's

Books on Sex Roles:

Fatima, Mernissi. BEYOND THE VEIL: MALE-FEMALE DYNAMICS IN A MODERN SOCIETY. Schenkman, 1975.

An absorbing examination of how relationships are changing between men and women by a Moroccan sociologist.

Friedl, Ernestine. WOMEN AND MEN: AN ANTHROPOLOGIST' VIEW. New York: Holt, Rinehart, and Winston, 1975, Waveland Press, 1984.

Explores the ways foraging and horticulture might shape the roles of the sexes.

Leibowitz, Lila. FEMALES, MALES, FAMILIES: A BIOSOCIAL APPROACH. North Scituate, MA: Duxbury Press, 1978.

Excellent book that explores sex in nature, primates as parents, and family forms in food growing, foraging, and industrialized societies.

Jacobson, Doranne W. "Purdah in India's Life Behind the Veil," NATIONAL GEOGRAPHIC, August 1977.

The article examines how the 1,000 year-old custom of purdah influences how women and men live on a day-to-day basis.

Martin, M. Kay and Barbara Voorhies. FEMALE OF THE SPECIES. New York: Columbia Univ. Press, 1974.

Examines variation in sex roles cross-culturally with an ecological model for explaining these differences.

Mead, Margaret. SEX AND TEMPERAMENT IN THREE PRIMITIVE SOCIETIES. New York: William Morrow, 1935, Morrow, 1963.

Examines how sexual roles vary in three New Guinea cultures.

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From her studies of sexual behavior in non-Western societies, Mead generalized and applies those generalizations to Western societies.

Paulme, Denise, ed. WOMEN OF TROPICAL AFRICA. Berkeley: Univ. of California Press, 1963.

This book corrects the usual preconceptions about the inferior position of women in a traditional African setting.

Rosaldo, Michelle Z. and Louis Lamphere. WOMEN, CULTURE, AND SOCIETY. Stanford, CA: Stanford Univ. Press, 1974.

A collection of readings discussing sex roles in Africa, South America, Asia and U.S.A.

Schlegel, Alice,ed. SEXUAL STRATIFICATION: A CROSS-CULTURAL VIEW. New York: Columbia Univ. Press, 1977.

This excellent series of papers analyzes sexual stratification from societies of male dominance to societies of sexual equality.

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(* = in Anthropology Resource Center
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Africa:

*Achebe, Chinua. THINGS FALL APART: THE STORY OF A STRONG MAN. New York: Fawcett, 1978.

A novel that recreates the author's Nigerian society at the end of the 19th century. Very dramatic. (H.S.) See also: ARROW OF GOD (Doubleday, 1969); NO LONGER AT EASE (Fawcett, 1977); A MAN OF THE PEOPLE (Doubleday, 1967).

*Clark, Leon E., ed. COMING OF AGE IN AFRICA: CONTINUITY AND CHANGE. (Part of a series THROUGH AFRICAN EYES: CULTURES IN CHANGE) Unit I. New York: Frederick A. Praeger, 1970.

The excellent selections were all written by Africans and the objective is to provide materials for the students to analyze as they seek possible solutions to the questions and problems raised in the book. It tries to have the students become empathetic with the feelings of what it is like to live in Africa. Good teacher lesson plans and bibliography. (Grades 9-12)

The other units are: FROM TRIBE TO TOWN, THE AFRICAN PAST, COMING OF THE EUROPEAN, THE COLONIAL EXPERIENCE, THE RISE OF NATIONALISM, AND NATION BUILDING.

Gatheru, R. Mugo. CHILD OF TWO WORLDS. New York: New American Library, 1972.

An American university educated Kikuyu describes in a very moving account his life growing up in a colonized Kenya. (H.S.)

Kenyatta, Jomo. FACING MOUNT KENYA* THE TRIBAL LIFE OF THE KIKUYU. AMS Press, 1976.

The author, an anthropologist and future President of Kenya, describes the economy, rites of passage, religion, and kinship of his own people. (H.S.)

*Laye, Camara. DARK CHILD: AN AUTOBIOGRAPHY OF AN AFRICA BOY. New York: Farrer, Strauss & Giroux, 1954.

A very readable and short description of his life in Nigeria and his decision to study in France. (Jr. & H.S.)

Perkins, Carol Morse an-' Marlin Perkins. I SAW FROM AFAR: A VISIT TO THE BUSHMEN OF THE KALAHARI DESERT. Atheneum, 1967.

Description and excellent photographs of a visit to the !Kung in the Kalahari Desert. (Jr. H.)

Read, Margaret. CHILDREN OF THEIR FATHERS: GROWING UP AMONG THE NGONI OF MALAWI. New York: Holt, Rinehart, and Winston, 1968, Irvington, 1982.

The book includes the goals of Ngoni child training, birth, play places, role of father, comparison of boys' and girls' lives in the villages, puberty rituals, and adult roles. (H.S.)

*Thomas, Elizabeth Marshall. THE HARMLESS PEOPLE. Random, 1965, 1989.

Excellent information on Bushmen games, myths, sharing, fluidity, and differences between groups. (H.S.) See also article on San peoples in VANISHING PEOPLES OF THE EARTH. Washington, D.C.: National Geographic Books, 1968.

*Turnbull, Colin. FOREST PEOPLE. New York: Simon & Schuster, 1968, Peter Smith, 1988. (Pygmy)

In this warmly human account, a beautifully written journal rather than a technical study, the author describes the way of life of the Congo Pygmies with whom he lived for almost three years. As the author has done, we follow the Pygmies as they carry on their daily activities in the forest and see their relations with Bantu villagers; we experience life from their point of view. This book is probably the best written account of a simple society and its culture, and it is made-to-order introduction to anthropology using the "discovery" approach. Easy reading. (H.S.)

Turnbull, Colin. THE LONELY AFRICAN. New York: Simon & Schuster, 1968, 1987.

This is impassioned commentary on the spiritual trauma experienced by individual Africans as a result of Western attacks and inroads on their traditional values. The African urbanite, already living in a nontribal kind of world, must justify this "disloyalty" to himself; the rural African, still tribal, must decide between the old and the new. In both cases, there results "conflict and loneliness in all but a lucky few." To present both types of personal problems, the author alternates chapters on urban problems (e.g. race, detribalization, and breakup of family system) with biographical chapters on individuals from an eastern Congo village when it was still under Belgian rule. (H.S.)

*Turnbull, Colin. THE MOUNTAIN PEOPLE. New York: Simon & Schuster, 1974.

The author describes the devastating life of the Ik who surrounded by game reserves can no longer depend on hunting for food. Those who remain are slowly starving and the social structure and supportive value systems are crumbling into an existence of every man for himself. (H.S.)

American Indians:

Borland, Hal. WHEN THE LEGENDS DIE. New York: Bantam, 1972, 1984.

A story about a mute Indian, his life in the mountains, at a reservation school, and as a rodeo rider when an adult. (Jr. H.)

*Craven, Margaret. I HEARD THE OWL CALL MY NAME. Dell, 1974, 1980.

A novel about traditional Kwakiutl Indian life and beliefs and the impact of outside technology and education. (Jr. & H.S.)

Eastman, Charles A. INDIAN BOYHOOD. New York: Dover Publications, 1971, Corner House, 1975.

A Sioux living at the turn of the century describes his training, play, family traditions, bear dance, maiden's feast, and legends. (H.S.)

George, Jean C. JULIE OF THE WOLVES. Harper and Row, 1972.

"A compelling story about 13-year old Julie, an Eskimo girl caught between the old ways and those of the whites, between childhood and womanhood. A thrilling adveuture which is, at the same time,a poignant love story." (School Library Journal) (Jr.H.)

*Hertzberg, Hazel. THE GREAT TREE AND THE LONGHOUSE. The Iroquois. New York: The Macmillan Co., 1966.

Two relevant chapters are kinship and family and roles of men and women. (Grades 9-10)

*Hoebel, Edward Adamson. THE CHEYENNES: INDIANS OF THE GREAT PLAINS. New York: Holt, Rinehart, and Winston, 1978. 2nd ed.

A sympathetic account of Cheyenne of 1840-1960. Discusses ritual and tribal integration, social structure, world view, etc. (H.S.)

INDIANS OF NORTH AMERICA. A series of individual publications on tribes and Indian leaders. Frank Porter III, General Editor. Chelsea House Publishers, Dept. WP3, P.O. Box 914, 1974 Sproul Rd., Suite 400, Broomall, PA 19008-0914. (J.H. & H.S.)

*Kroeber, Theodora. ISHI, LAST OF HIS TRIBE. Bantam, 2973.

Moving story of a California Indian, sole survivor of the Stone Age, who entered the 20th century at the age of 50. Also gives a good historical background on the relationships and conflicts between the settlers and the California Indians. (H.S.)

Marriott, Alice. SAYNDAY'S PEOPLE. University of Nebraska Press, 1963.

The book combines Winter-Telling Stories and Indians on Horseback. The former is a series of stories about Saynday, a trickster and hero in American Indian mythology. The latter section describes the Kiowa's way of life. (H.S.)

O'Dell, Scott. SING DOWN THE MOON. Dell, 1977.

A poignant first-person story about Navaho life in the mid-1860's when they migrated against their will from their original homeland in Arizona to Fort Sumner, New Mexico. Includes descriptions of traditional rites-of-passage. (Jr.H.)

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A white colonial boy kidnapped by Indian learns to appreciate Indian culture. (H.S.)

*Ruesch, Hans. TOP OF THE WORLD. New York: Pocket Books, 1977. Also BACK TO THE TOP OF THE WORLD, Pocket Books, 1977.

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Udell, Louise. ME AND MINE. Tucson: Univ. of Arizona Press, 1969.

The life story of a Hopi woman. (H.S.)

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Castaneda writes of his experiences as a fledgling anthropology student who wanted to penetrate the separate, nonordinary reality of the shaman's world. Some argue the book is fiction, not fact. (H.S.)

*Chagnon, Napoleon A. YANOMAMO, THE FIERCE PEOPLE. New York: Holt, Rinehart, and Winston, 1977.

Chagnon's ethnography of the Yanomamo, who live in Brazil and Venezuela, includes a description of his fieldwork conditions and methods. He argues that their chronic warfare stem from a shortage of women.

Jocano, F. Lands. GROWING UP IN A PHILIPPINE BARRIO. New York: Holt, Rinehart and Winston, 1969.

Excerpts from a number of lives of children and youth. (H.S.)

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New York: Random House, 1966, 1979.

Inside view of a family of slum dwellers residing in Mexico City during time of rapid social and economic change. (H.S.)

Madsen, William. THE VIRGIN'S CHILDREN: LIFE IN AN AZTEC VILLAGE TODAY. Westport, CT: Greenwood Press. Reprint of 1960 ed.

Contains excellent photographs and drawings by a 10 year-old village boy along with descriptions of religion, child raising, social organization, and government.

India:

Markandaya, Kamala. NECTAR IN A SIEVE. New York: New American Library, 1956.

Beautiful love story about Indian peasant family's struggles in a changing society. (H.S.)

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Bettleheim, Bruno. CHILDREN OF THE DREAM. New York: Avon Books, 1971. (H.S.) Spiro, Melford A. CHILDREN OF THE KIBBUTZ: A STUDY IN CHILD TRAINING AND PERSONALITY. Cambridge: Harvard Univ. Press, 1975. (H.S.)

The Bettleheim book and Spiro's are valuable comparisons of kibbutz life. The authors arrive at different conclusions.

Japan and Pacific Cultures:

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It treats most fully the subject of marriage, quite important in Tiwi life after the age of 30. It relates marriage institutions to the physical environment, the food quest, and sociopolitical behavior. (H.S.)

*Mead, Margaret. COMING OF AGE IN SAMOA. Caldwell, NJ: William Morrow & Co., 1971. GROWING UP IN NEW GUINEA. Caldwell, NJ: William Morrow & Co., 1976. SEX AND TEMPERAMENT IN THREE SOCIETIES: Morrow, 1963. (H.S.)

Mead, Margaret. BLACKBERRY WINTER. New York: Simon & Schuster, 1973, Washington Square Press, 1985.

Excellent description of what it means to grow up in a "liberal", intellectual and wealthy household in the early part of the century. Also describes her fieldwork experiences. (H.S.)

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The reporter's account focuses on the discovery of the Tasaday and their first three years of intermittent contact with "modern society." In recent years controversy has risen over the authenticity of these supposedly stone-age people. (H.S.)

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Describes the Kapuku as of 1954 with their stone age technology. "He characterizes their society as a form of 'primitive capitalism' because it had true money, a decimal counting system, well-developed trade, a legal system based on precedents, and a greater degree of social mobility and emphasis on wealth than in U.S. He wrote the book to counteract generalizations about preliterate peoples being typically communal and religious in outlook." (H.S.)

OTHER TEACHING MATERIALS

(* = in Anthropology Resource Center for Teachers,
National Museum of Natural History)

*AFRO-CITY: ABEPLITA NIGERIA (Life of the Eqba Yoruba) by Ray Glazier. Cambridge, MA: Games Central, 1973.

Includes: wall map; 36-slides; filmstrip; student text LIFE OF EQBA YORUBA; tape cassette "A Guided Tour of Yorubaland" and "Grandfather's History of Abeokuta"; Slave Coast Game; teacher manual. Fine ideas but not always the most imaginative or visually exciting products. 2 weeks minimum. (Jr. & H.S.)

*ANTHROPOLOGY CURRICULUM PROJECT
University of Georgia, 1969. Life Cycle Unit. (Experimental material). Available only through inter-library loan.

Includes introduction to Anthropology, Life Begins, Childhood, Adulthood. and Old Age. Gives review questions, activities and resource materials. Tiv, Serbia, U.S.A., and China are cultures focused on. (Grade 7)

OPENING DOORS: CONTEMPORARY JAPAN.
New York: Asia Society, Inc., Jan. 1979. (212) 288-6400.

An excellent and comprehensive guide to teaching resources on Japan.

*ANTHROPOLOGY AND EDUCATION: AN ANNOTATED BIBLIOGRAPHIC GUIDE by Jacquetta Burnett. New Haven, CT: Human Relations Area Files Press for Council on Anthropology and Education, 1974.

An excellent resource.

*CHANGING AFRICA: A VILLAGE STUDY UNIT.
Interculture Associates, Box 277, Thompson, CT 06277.

The Kpelle people of Balama, Liberia are the cultural group and the kit materials contain the excellent book by John Gay, RED DUST ON THE GREEN LEAVES, as well as artifacts and lots of activity suggestions. Teachers may select another book for younger groups and still use the activities from the guide. (Grades 9-12)

COUNCIL ON INTERRACIAL BOOKS FOR CHILDREN. Racism/Sexism Resource Center for Educators, 1841 Broadway, N.Y., N.Y. 10023 (212-757-5229).

They produce books, filmstrips, teaching units, bibliographies, to help combat racism and sexism. You can write for 1981-82 catalog.

EXPLORING CHILDHOOD. (Beyond the Front Door, Childhood memories, Children in Society, No Two Alike: Helping Children with Special Needs.) Education Development Center, Cambridge, MA, 1974.

About 20 lessons in each unit. The Childhood Memories unit is particularly applicable to topic Growing-Up in Non-Western Societies. It includes biographies from Navaho, African, Chinese-American, Russian, Afro-American, Jewish-Canadian, Mexican, and Sioux boys and girls. (H.S.)

ASIA: TEACHING ABOUT/LEARNING ABOUT by Seymour Fersh. New York: Teachers College Press, Columbia Univ., 1978.

An excellent resource for activities with books on Asia.

AN ANNOTATED BIBLIOGRAPHY OF ANTHROPOLOGICAL MATERIALS FOR HIGH SCHOOL USE by James Gallagher. New York: The Macmillan Co., 1967.

Not up-to-date, but a good guide for classic materials that are still useful.

*HUNTER-GATHERER GAME AND FARMER-HERDER GAME.
About !Kung San and Bantu farmer-herders. Part of material prepared for KALAHARI DESERT PEOPLE. National Geographic, 1975.

The excellent game includes game boards, score sheets, cards and teachers guide of discussion questions and bibliography. (H.S.)

*THE !KUNG OF THE KALAHARI
By Walter Bateman. Part II of curriculum MAN THE CULTURE BUILDER. Boston, MA: Unitarian Universalist Association/Beacon Press 2970.

18 lesson plans. Two sections: 1) The Kung Bushmen including Kin and Joking and Marriage, Life Cycle and Myths of Creation, etc.; 2) Our Own Culture including the Life Cycle of a North American Male and Female, North American Rite of Page, etc. Curriculum includes teacher's guide, student text, teaching activities filmstrips, and kinship charts. (Grades 4-7)

*MAN THE CULTURE BUILDER. Part I, The Navaho of the Painted Desert by Walter Bateman. Unitarian Universalist Associates. Beacon Press, MA 02108.

A very good unit. Student readings are interesting and realistic. Culture of Navajo Indians as it existed before 1880. Topics: interrelation of living things with emphasis on desert environment, kinship--our culture/Navajo culture, and the Navajo and their culture: life cycle, ceremony, ritual, creation myth, sand paintings, chants and healing. (Grades 4-7)

*MODERNIZATION AND TRADITIONAL SOCIETIES. A unit from PATTERNS IN HUMAN HISTORY. Published by Macmillan Co. (School Division), Riverside, NJ.

Topics include peasants and peasant origins (readings describe groups in Iran, Vietnam, Peru, Mexico, Greece, Turkey, Ireland, India, Soviet Union, Lithuania, Ancient Egypt); modernizing a traditional Peruvian society; slums and barridas of Lima; and mechanisms of social control. Length 3 weeks (H.S.)

THE NATIVE PEOPLE OF THE NORTHEAST WOODLANDS. An educational resource publication. 1990. Publications, National Museum of the American Indian, Broadway at 155th St., New York, NY 10032.

*THE NAVAJO OF THE PAINTED DESERT
By Walter Bateman. Part I of curriculum MAN THE CULTURE BUILDER. Boston, MA: Beacon Press, 1970.

17 lesson plans including topics on culture, kinship, and life cycle ceremonies. Includes teacher's guide, student texts, slides, map, filmstrip, record and kinship charts. (Grades 4-7)

*POTLATCH PACKAGE. Abt Associates.

2 week modular social studies unit for 30 students. Consists of two games and student text, LIFE OF THE KWAKIUTL INDIANS. (H.S.)

*STUDYING SOCIETIES.
A unit from PATTERNS OF HUMAN HISTORY. Published by Macmillan Co. (School Division), Riverside, NJ.

An excellent beginning for study of anthropology. The topics are adaptation among hunting and gathering bands and the ways status and role structure human activities. The San (Bushmen) of the Kalahari and the Mbuti pygmies are the examples used. The kit includes teaching plan, student readings book filmstrips, records, transparencies and blackline masters. Length 3 weeks. (H.S.)

FILMS

For listings consult:

Karl G. Heider. FILMS FOR ANTHROPOLOGICAL TEACHING. 7th ed. Washington, D.C.: American Anthropological Association, 1983.

FILMS: THE VISUALIZATION OF ANTHROPOLOGY. Order the catalog from The Pennsylvania State University, Audio Visual Services, Special Services Building, University Park, Pennsylvania 16802; (814) 863-3103.

D.E.R.: A NEW GENERATION OF FILM. A complete listing of films from Documentary Educational Resources (D.E.R.) supplemented by extensive cultural and historical background material. D.E.R., 101 Morse St., Watertown, MA 02172; (617) 926-0491.

Suggested Films:

FILMS AND VIDEOS ON THE YANOMAMO INDIANS by Timothy Asch and Napoleon Chagnon. Documentary Educational Resources (D.E.R). Twenty-two titles in this series including "Magical Death," "The Feast," "The Ax Fight," and "A Man Called 'Bee': Studying the Yanomamo."

N!AI, THE STORY OF A !KUNG WOMAN. A film from the ODYSSEY SERIES, a production of Public Broadcasting Associates. Available in all video formats from D.E.R. For rental of 3/4" videocassettes contact PBS Video, Public Broadcasting Service, 1320 Braddock Place, Alexandria, VA 22314; (703) 739-5380.

This documentary is the story of one woman from childhood to middle age and records the contrast in lifestyle between traditional nomadic !Kung life and her life today with 800 people on a government settlement.

FILMS AND VIDEOS ON THE !KUNG/GWI SAN PEOPLES OF NAMIBIA by John Marshall. D.E.R. Twenty-two titles in this series including "Pull Ourselves Up or Die Out," "!Kung San: Resettlement," "!Kung San: Traditional Life," "A Curing Ceremony," and "Bitter Melons." Texts and study guides available for some of the films.

BUSHMEN OF THE KALAHARI: Parts 1 and 2. (1975) 50 min. National Geographic Society. Distributed by Pennsylvania State University, Audio Visual Services.

An excellent film by John Marshall which portrays traditional Bushmen life that he originally filmed (i.e. The Hunters) and their life geared to restricted territories, horses, guns, and goats 25 years later.

THE HUNTERS. A John Marshall film. Films, Inc. Chicago.

Other African Cultures

PYGMIES OF THE RAIN FOREST. (PFP) 1975 50 min. color. Advisor. Colon Turnbull.

KENYA BORAN: PART I - RURAL SOCIETY. 1974. 33 min. color. Distributed by Pennsylvania State University, Audio Visual Services.

A town and a new road encroach upon the traditional herding area. The film explores the choices confronting two fathers and their sons.

KENYA BORAN: PART II - EDUCATION. 1974 32 min. color. Distributed by Pennsylvania State University, Audio Visual Services.

Through the eyes of a sixteen year-old former herdsboy who is now a boarding school student, the film explores what value will the education have with a bleak economic outlook in the area.

Other Films on Socialization: (All distributed by Pennsylvania State University, Audio Visual Services.)

FOUR FAMILIES: Part 1. 1960 b/w 29 min. Part 2. 1960 30 min. b/w

Comparative treatment of infants in India, France, Japan, and Canada. Dr. Margaret Mead comments and interprets infant socialization. Theoretical problems of relationship between child rearing and adult personality formation emphasized.

NANOOK OF THE NORTH: Part 1 & 2. rev. ed. 1976. 65 min. b/w

Their struggle for survival against harsh arctic conditions is juxtaposed with scenes of Nanook, his wife Nyla, their baby, and small son as they go about their daily activities.

DEAD BIRDS (MGHT) 1963. 83 min. color.

A documentary on the Dugum Dani, a Western New Guinea Highland society, prior to pacification by the government. Focuses on warfare, funeral, feasting, horticulture, animal husbandry, settlement patterns, and territoriality.

THE SEXES: ROLES. 1972 28 min. color 32332.

Surveys evolution of male-female roles from prehistory to current industrial age.

Films from ODYSSEY 1981-1982 (Annotations from ODYSSEY, Educator's Guide, July 1981)

DADI'S FAMILY. Rental from D.E.R.

In watching a joint family of farmers in northern India as they work, share meals, converse, and prepare for a wedding, we witness the affections, cooperation, obedience to authority, and perpetual resolution of tension that bind an essential unit of Indian life. Dadi ("grandmother"), the central force in the family and in the program, organizes, directs, instructs and placates many members of the family in order to maintain its prosperity and respectability in the face of change.

SOME WOMEN OF MARRAKECH

For rental, contact Maria Sanchez, ISHI, 3401 Market St., Suite 252, Philadelphia, PA 19104; (215) 387-9002.

An inquiring and imaginative group of Western women has captured in SOME WOMEN OF MARRAKECH the largely hidden life of Islamic Moroccan women. By seeing women talking about and among themselves and by witnessing their home life, social activities, and ceremonies, we gain insight into the Moroccan family, the significance of Islam in defining women's roles, and the intense bond of friendship the women share.

THREE WORLDS OF BALI. Available from D.E.R.

CLASSROOM ACTIVITIES

1. Ceremonies:

   a. Learn about another culture's ceremony and try to re-enact it as closely as possible. An example is the Japanese tea ceremony. See the M.A.T.C.H. unit catalogue (a copy is available in the Naturalist Center, National Museum of Natural History) for teaching about Japanese family life.

   b. Construct a personal time-line. A composite of all the students can be put on the walls around classroom. Have students write down everything designating coming-of-age and describe any associated rituals and ceremonies.

   c. Discuss the difference between ceremony, ritual, and custom. (Ceremony usually has a beginning, middle, and end. It also embodies myth and can be re-enacted.)

   d. Analyze ceremonies and rituals in the school.

   e. Observe ceremonies in your community. (a Bar Mitzvah, Chinese New Year celebration, Kwanza, a Mass). Discuss as a class their meaning and function. Or have each student take one religion to research, interview relevant people, and observe rituals. Or have several students discuss their own religion's ceremonies.

   f. Describe a ceremony in your own culture to a person in another culture.

2. Kinship roles:

   a. Construct kinship charts for your family.

   b. Discuss who does what in their family--use role playing.

   c. Describe an incident from the point of view of a child, then a parent, then a godparent, and then an outsider.

   d. Make a list of all the terms of reverence and address you know of for your different relatives. Then compare your terms with other students'. Compare particularly girls' and boys' terms for mother and father. Any difference? Any differences between ethnic groups?

3. Interviews:

   a. Have students interview students enrolled in "English as a Second Language" (ESL) classes and the ESL students can ask questions of the American students. Possible questions might be:

      1) What are the groups or institutions which are important in your life?
      2) What are the rules of behavior in each of these groups?
      3) How did you learn these rules?
      4) Rank the groups in order of importance to you.

   For more details see: Martha Williams, "Teachers' Corner: Fieldwork in the Classroom," Anthro.Notes, vol. 3, no. 2, Winter 1981, pp. 4-5.

b. Interview three generations of mothers about birth or raising children. For sample questions and guidelines consult Dick Abell's teaching unit Human Life Cycle in the Naturalist Center, National Museum of Natural History.

c. Have students interview people of different ages and backgrounds to find out what those people think it means to be an adult in our society or an adolescent.

d. Have students interview their parents on their "growing up" or life for them in the "8th grade."

4. Speakers:

a. Invite someone from Parent and Child or Lamaze ASPO classes.

b. Invite a pediatrician or obstetrician to talk about birth in our society.

c. Invite a rabbi, priest or minister to discuss meaning of "life crisis" ceremonies.

d. Invite a person to talk about their stage of life--a teenager, a young mother, a person in their 40's, 50's or 70's.

5. Trip: Look at the role of children in Amish society, rural America, Williamsburg.

6. Childrens' Games and Stories:

a. Have students describe and analyze behavior and role attitudes expressed in childrens' games and fairy tales. Make a study of what nursery rhymes are "teaching". Sex roles? Superstitions? Magic? Myth?

b. Listen to the record, "Free to be You and Me", by Marlo Thomas. Have the student discuss how the record encourages girls and boys to behave and compare that to what their immediate society encourages.

7. Observations:

a. Have the student observe a playground, day nursery, Bar Mitzvah, Baptism, and record their observations.

b. Have students observe how the school functions as a socializing agent, i.e. what behavior is rewarded, what behavior is punished.

8. Study attitudes toward youth and old age through the media, especially advertising.

9. Compare primate and human mothering.

10. Ask high school students to read novels that describe growing up in different sub-cultures in the U.S. For example: THE CHOSEN by Chaim Potok, A MEMBER OF THE WEDDING by Carson McCullers, ON THE ROAD by Jack Kerouac, INVISIBLE MAN by Ralph Ellison, HUCKLEBERRY FINN, by Mark Twain, STUDS LONIGAN by James Farrell.

(This resource guide was originally prepared by JoAnne Lanouette for Anthropology for Teachers Program, 1978-82.)

Information from the
National Museum of Natural History
SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

PRIMATE BEHAVIOR

**Teacher and student bibliographies,
films, and classroom activities**

TEACHER BIBLIOGRAPHY

Altmann, Jeanne. BABOON MOTHERS AND INFANTS. Cambridge, Ma.: Harvard Univ. Press, 1980.

Excellent model for data collection and analysis that deepens our understanding of baboon mothers and infants in their social and ecological context.

Bowden, Douglas M., ed. AGING IN NON-HUMAN PRIMATES. New York: Van Nostrand Reinhold, 1979.

Chance, Michael R.A. and Clifford J. Jolly. SOCIAL GROUPS OF MONKEYS, APES, AND MEN. New York: E.P. Dutton & Co., Inc., 1970.

This survey of primate groups first defines the primates, their major classifiable divisions, and their present geographical distribution, followed by introductory discussions of chimpanzees, gorilla, gibbon, baboon, and macaque mother-infant relations, socialization, social structure, and behavior.

Chivers, David J., ed. MALAYAN FOREST PRIMATES: TEN YEARS' STUDY IN TROPICAL RAIN FOREST. New York: Pelnum Press, 1980.

As a very informative but not easy to read book, it provides excellent descriptive information about range, feeding habits, and social organization of siamangs, gibbons, leaf monkeys, and long tail macaques.

Chivers, D.J., J. Herbert, eds. RECENT ADVANCES IN PRIMATOLOGY. New York: Academic Press, 1978.

Volume 4 focuses on medicine: infectious diseases, use of primates in research on transmissible cancer, and use of primates in research on human reproduction. Extensive bibliography.

Erwin, J., Terry L. Maple, and G. Mitchell, eds. CAPTIVITY AND BEHAVIOR: PRIMATES IN BREEDING COLONIES, LABORATORIES, AND ZOOS. New York: Van Nostrand Reinhold, 1979.

The book is intended for zoo keepers, scientists, veterinarians, and colony managers of primates. The authors write about their concern about the impact of captivity and examine abnormal behaviors, abnormal environments, social attachment potential in captive rhesus monkeys, baboon behavior in crowded conditions, and environmental enrichment. Bibliography included.

Fleagle, John G. PRIMATE ADAPTATION AND EVOLUTION. Academic Press, HBJ, 1988.

Covers adaptation, evolution, systematics, primate life, New World anthropoids, Old World monkeys, apes, and humans.

Hamburg, David A. and Elizabeth R. McCown, eds. THE GREAT APES. Menlo Park, Ca.: The Benjamin/Cummings Publ. Co., 1979.

The book is an interesting college level collection of recent articles, all by leading scholars, some quite technical.

Harlow, Harry F. and Clara Mears. THE HUMAN MODEL: PRIMATE PERSPECTIVES. New York: Halstead Press, 1979.

Hinde, Robert A., ed. RECENT ADVANCES IN PRIMATOLOGY. 4 vols. New York: Academic Press, 1978.

Papers presented at the 1976 symposium summarize information in all areas of the field including medical research, studies on language, and communication, socialization, and social relationships.

Hinde, Robert A. BIOLOGICAL BASES OF HUMAN SOCIAL BEHAVIOR. New York: McGraw Hill, Inc., 1974.

The author of this biologically focused work first introduces some basic behavioral concepts, followed by discussions of the causation and development of communication, social behavior, aggression, and social structure in a variety of animals, including the primates.

Jolly, Alison. THE EVOLUTION OF PRIMATE BEHAVIOR. New York: The Macmillan Co., 1972.

Divided into three major sections--ecology, society, and intelligence--this introductory survey of various non-human primates notes social and behavioral patterns common to the many social primates including man.

Jolly, Alison. A WORLD LIKE OUR OWN: MAN AND NATURE IN MADAGASCAR. New Haven, Ct.: Yale Univ. Press, 1980.

In describing the human needs that are precipitating ecological disaster in Madagascar, Jolly aptly describes the dilemma of the forty kinds of lemurs and other plants and animals living on the island.

Kummer, Hans. PRIMATE SOCIETIES, GROUP TECHNIQUES OF ECOLOGICAL ADAPTATION. Chicago: Aldine/Atherton, Inc., 1971.

Based essentially on the author's field research among the hamadryas baboons, this book offers an analysis of primate social life explaining the manner in which genetically based behavior is altered in accordance with the group's particular physical and social setting.

Kummer, Hans. SOCIAL COMMUNICATION OF HAMADRYAS BABOONS: A FIELD STUDY. New York: S. Karger, 1968.

Observations of hamadryas baboon troops by the author confirm earlier reports that the social organization of baboons inhabiting open, relatively treeless environments are dominated by male-owned harems of females. The composition, aggressive behavior, sexual relations, and development of these male-owned harems are described and analyzed.

Lancaster, Jane B. PRIMATE BEHAVIOR AND THE EMERGENCE OF HUMAN CULTURE. New York: Holt, Rinehart, and Winston, 1975.

This good introductory work outlines areas of non-human primate behavior relevant to our understanding of human adaptation, behavior, and evolution.

Maple, Terry L. ORANG-UTAN BEHAVIOR. NEW YORK: VAN NOSTRAND REINHOLD, 1980.

A compilation of information on both wild and captive orangutans, Maple is particularly concerned with better maintenance of the captive orangutan and therefore describes expressions, sexuality, birth, parental behavior, intellect, captive and natural habitat, and the conservation of the orang-utan.

Montagna, William. NON-HUMAN PRIMATES IN BIO-MEDICAL RESEARCH. Mpls.: Univ. of Minnesota Press, 1976.

With a lecture series as the basis, Montagna argues that medical researchers need to understand the behavior and needs of primates as well as their physiology. He concisely discusses the natural history of primates, social behavior of Japanese macaques, and the diseases common to monkeys and man such as tumors, cholesterol, gallstones, tuberculosis, malaria, and yellow fever. With such information, he hopes medical researchers will use monkeys more wisely and work towards international cooperation in protecting the diversity of primates. Bibliography included.

Napier, John R. and Prue H. Napier. A HANDBOOK OF LIVING PRIMATES: MORPHOLOGY, ECOLOGY, AND BEHAVIOR OF NONHUMAN PRIMATES. New York: Academic Press, 1967.

The first section of this standard primate reference book discusses the functional morphology of primates followed by a description of the location, ecology, genetics, and behavior of each genus in the second section. Presented in the final section are a taxonomic list of living primates, their common names, a detailed discussion of macaque species, and extensive comparative material including discussions of habitats and locomotion.

Omark, Donald R., Fred F. Strayer and Daniel G. Freedman. DOMINANCE RELATIONS: AN ETHNOLOGICAL VIEW OF HUMAN CONFLICT AND SOCIAL INTERACTION. New York: Garland Publishing, 1980.

Ransom, Timothy W. BEACH TROOP OF THE GOMBE. New Jersey: Associated Univ. Press, Inc., 1981.

The author studied baboons in two troops with populations of 58 and 70. The book is valuable not only in giving a total picture of the life of the baboons but also in countering many of DeVore's conclusions. Ransom has a firm sense of how much evidence he has and how he used it to develop his ideas. The book discusses the demography, ecology, communication, sexual and consort behavior, social organization and inter-troop relations of the baboons, as well as the fieldwork conditions. An interesting aspect is the effect of the feeding station set up by Goodall on the baboons.

Roonwal, M.L. and S.M. Mohnot. PRIMATES OF SOUTH ASIA: ECOLOGY, SOCIOBIOLOGY, AND BEHAVIOR. Cambridge, Ma.: Harvard Univ. Press, 1977.

A compendium with summaries of key references on tree shrews, lorises, macaques, leaf monkeys, baboons, and siamangs. For each species, they give information about the size and weight, vernacular name, external characteristics, distribution, ecology, sociobiology, behavior and references.

Rowell, Thelma. THE SOCIAL BEHAVIOR OF MONKEYS. Baltimore: Penguin Books, 1972.

An introductory work drawn from the author's field and laboratory research that first describes many typical behavioral and physical features of monkeys, followed by discussions of many aspects of Ishasha baboon groups. Communication within groups, the various forms of social organization, child rearing, and the estrus cycles are also discussed. Common views of territoriality and hierarchy are critically reviewed.

Savage-Rumbaugh, E. Sue. APE LANGUAGE: FROM CONDITIONED RESPONSE TO SYMBOL. New York: Columbia University Press, 1986.

Schaller, George B. THE MOUNTAIN GORILLA: ECOLOGY AND BEHAVIOR. Chicago: Univ. of Chicago Press, 1963.

Representing the first scientific study of the gorilla, this work describes and analyzes every aspect of gorilla behavior, social relations, ecology, and population density observed by the author in 1959-1960. This research proves that the gorilla is not a ferocious animal, but a rather timid and shy one.

Simonds, Paul E. THE SOCIAL PRIMATES. New York: Harper and Row, 1974.

An introductory look at the social, nonhuman primates, discussing primate classification, evolution, communication, use of space, grooming, play, sex, social organization, and adaptive mechanisms of primate society.

Smuts, Barbara B. SEX AND FRIENDSHIP IN BABOONS. New York: Aldine, 1985.

Struhsaker, Thomas. THE RED COLOBUS MONKEY. Chicago: Univ. of Chicago Press, 1976.

This readable, thorough book focuses on the ecological adaptation of one species of Colobus monkeys.

Strum, Shirley C. ALMOST HUMAN: A JOURNEY INTO THE WORLD OF BABOONS. Random House, 1987.

Susman, Randall. "Acrobatic Pygmy Chimpanzees," NATURAL HISTORY MAGAZINE 89 (September 1980):33-38.

By describing his field study results of pygmy chimpanzees in Zaire and the rationale of others for considering the pygmy chimpanzee the ideal candidate for modeling the ancestral human condition, Susman is able to cogently explain why that ideal is in doubt. He compares the interesting differences between the pygmy and common chimpanzee's locomotion and shoulder anatomy.

Sussman, Robert W. PRIMATE ECOLOGY: PROBLEM ORIENTED FIELD STUDIES. New York: John Wiley and Sons, 1979.

The college level reader contains many interesting technical articles and a good summary introduction.

Szalay, Frederick S. and Eric Delson. EVOLUTIONARY HISTORY OF THE PRIMATES. New York: Academic Press,1979.

Teleki, Geza. THE PREDATORY BEHAVIOR OF WILD CHIMPANZEES. Cranbury: Associated Univ. Press, 1973.

Teleki, Geza and Birute M.F. Galdikas. "Variations in Subsistence Activities of Female and Male Pongids: New Perspectives on the Origins of Hominid Labor Division," CURRENT ANTHROPOLOGY 22 (June 1981): 241-247. Comments, pp. 248-253. Bibliography, pp. 253-256.

A stimulating article that argues the data on chimpanzees and orangutans suggests "that ecological separation of the sexes, along with limited male-female sharing of food, may exist among all pongids." By comparing the orangutan and chimpanzee omnivorous adaptations, some insights occur into the evolutionary process "whereby sex differences in behavior led to incipient labor division and eventually to culturally encoded and modulated labor division, as it occurs in modern human societies."

Teleki, Geza and R.S.O Harding, eds. OMNIVOROUS PRIMATES: GATHERING AND HUNTING IN HUMAN EVOLUTION. New York: Columbia University, Press, 1981.

This collection of articles attempts to prove that non-human primates are omnivorous, not just plant eaters, and discusses the significance of their diets and eating habits for human evolution. In so doing it argues against hunting as *the* decisive factor differentiating the earliest hominids.

STUDENT BIBLIOGRAPHY ON PRIMATES

Annixter, Jane and Paul Annixter. MONKEYS AND APES. New York: Franklin and Watts, 1976. (High School)

The survey treatment appropriate for secondary school readers.

Eimerl, Sarel, Irven DeVore, *et al.* THE PRIMATES. New York: Time Inc., 1974. (Jr. High/High School)

Drawing on current field and laboratory primate studies, this beautifully illustrated work emphasizes the behavioral patterns of a variety of primates. Discussions include childhood learning, group structure, and the similarities between the apes and man. A topical bibliography is provided.

Eimerl, Sarel. BABOONS. New york: Simon & Schuster, 1968. (High School)

Freeman, Dan. THE GREAT APES. New York: G.P. Putnam's Sons, 1979. (High School)

An excellent introduction to the historical study of primates and present knowledge. Freeman tells the misguided early stories and public attitudes on apes with historical drawings and photographs. With full page colored pictures, he describes how recent field studies have altered those views. The chapters focus on orangutans, gorillas, chimpanzees, the path to humans, and protection of the endangered ape. Although he gives Leakey's point of view on human evolution and does not include Johanson's finds and more recent theories, the book remains an excellent survey for the high school student just beginning to read about non-human primates.

Kevles, B. WATCHING THE WILD APES. New York: E.P. Dutton and Co., 1976. (High School)

The book has some problems with misinformation, but is generally informative and readable.

Lancaster, Jane B. THE CHIMPANZEES OF GOMBE: PATTERNS OF BEHAVIOR. Cambridge, MA: Belknap Press, Harvard University Press, 1986.

_____________. PRIMATE BEHAVIOR AND THE EMERGENCE OF HUMAN CULTURE. (Jr. & Sr. High)

This good introductory work outlines areas of non-human primate behavior relevant to our understanding of human adaptation, behavior and evolution.

Lawick-Goodall, Jane van. MY FRIENDS THE WILD CHIMPANZEES. Washington, D.C.: National Geographic Society, 1968. (Jr. & Sr, High)

This popular account of the author's research among the chimpanzees of Gombe Stream includes superb color pictures by Baron Hugo van Lawick.

_____________. IN THE SHADOW OF MAN. New York: Dell Publishing, 1971. (High School)

Popular but very informative report of Goodall's work with the chimpanzees. Describes particularly well Flo and her offspring.

MacKinnon, John. THE APE WITHIN US. New York: Holt, Rinehart, and Winston, 1978. (High School)

A very readable book in which the first half covers primate behavior derived from the author's field studies in Far East. The second half concentrates on human evolution from our hominoid past and highlights the apish behavior within us.

_____________. IN SEARCH OF THE RED APE. New York: Holt, Rinehart, and Winston, 1974. (High School)

The book is a personal narrative with color photographs of his experiences searching for and finding the orangutan in the forests of Borneo and Sumatra.

Napier, John. MONKEYS WITHOUT TAILS. New York: Taphinger Publ. Co., 1976. (H.S.)

Napier, Prue. MONKEYS AND APES. A GROSSET ALL-COLOR GUIDE. New York: Grosset and Dunlop, 1972. (Jr. & High School)

This short, clearly written work includes color illustrations and discussions of all the major primates, their anatomy, behavior, social structure, diet, and reproduction.

Pfeiffer, John. THE EMERGENCE OF HUMANKIND. New York: Harper and Row, 1985. (High School)

Well-written, general book covering topics such as the behavior of non-human primates and of early humans, experimental archeology, and the future of man, as well as giving an overview of human evolution.

Schaller, George B. THE YEAR OF THE GORILLA. Chicago: Univ. of Chicago Press, 1964.

This popular account of the author's 1959-1960 observation of the highland gorilla makes interesting, informative reading for the non-specialist or younger reader.

Teleki, Geza and Karen Steffy. GOBLIN, A WILD CHIMPANZEE. New York: E.P. Dutton & Co., 1977. (Elem.& Jr. High)

Written for children, but informative and based on Teleki's work with the Gombe Stream chimpanzees.

OXFORD BIOLOGY READERS, edited by J.J. Head/Oxford Univ. Press. (High School)

Miles, A.E.W. TEETH AND THEIR ORIGINS. 1972.

This pamphlet discusses various kinds of teeth including mammalian and primate teeth.

Napier, J.R. PRIMATE LOCOMOTION. 1976.

This pamphlet covers the anatomy of primates and modes of locomotion in detail.

CAROLINA BIOLOGY READERS, edited by J.J. Head/Oxford Univ. Press

Day, H.H. THE FOSSIL HISTORY OF MAN. 1984.

A concise, up-to-date coverage of early sites.

Articles: (all High School level)

Bronowski, Jacob and Ursula Bellugi. "Language, Man, and Concept," SCIENCE 168 (May 1979): 669-673.

Galdikas, Birute M.F. "Living with the Great Orange Apes," NATIONAL GEOGRAPHIC 157 (June 1980)

Hill, Jane. "One the Evolutionary Foundations of Language," AMERICAN ANTHROPOLOGIST 74 (1972): 308-317.

Lieberman, Crelin and Klatt Lieberman. "Phonetic Ability and Related Anatomy of Newborn, Adult Human, Neandertal, and Chimpanzee," AMERICAN ANTHROPOLOGIST, 74 (1972): 287-307.

Patterson, Francine. "Conversations with a Gorilla," NATIONAL GEOGRAPHIC MAGAZINE 154 (October 1978):438-465.

Premack, David. "Language in Chimpanzee?" (Sarah) SCIENCE, 172 (1971): 808-822.

Susman, Randall. "Acrobatic Pygmy Chimpanzees," NATURAL HISTORY 89 (September 1980): 32-39.

"Talking Chimps," NATIONAL GEOGRAPHIC WORLD (October 1978):23-27.

Teleki, Geza. "The Omnivorous Chimpanzee," SCIENTIFIC AMERICAN, 228 (January 1973): 32-42.

Terrace, H.S. *et al*. "Can an Ape Create a Sentence?" SCIENCE, 206 (November 1979): 65-91. Also "How Nim Chimpsky Changed My Mind," PSYCHOLOGY TODAY 13 (November 1979): 65-91.

Washburn, S.L. and Irven DeVore. "Social Life of Baboons," SCIENTIFIC AMERICAN, 204 (1961):62-72. Available as SCIENTIFIC AMERICAN offprint #614.

Films:

1. Baboon Film Series Baboon Behavior 31 min. Baboon Ecology 21 min. Baboon Social Organization 17 min.	Univ. of Calif. Extension 2223 Fulton Street Berkeley, CA 94720 (415) 642-0462
2. Baboon Social Structure Series (F.D.C. films) Animals in Amboseli 20 min. Baboon Development: Older Infant 8 min. Baboon Development: Younger Infant 10 min. The Baboon Troop 23 min. Dynamics of Male Dominance in a Baboon Troop 23 min. Evening Activity 5 min. Observing Baboons from a Vehicle 5 min.	Universal Education & Visual Arts Inc. 221 Park Avenue New York, NY 10003 (212) 777-6600
3. Miss Goodall and the Wild Chimpanzee 28 min.	Univ. of California *op cit* National Geographic Catalog
4. Vocalization of Wild Chimpanzees 40 min. Made by Peter Marler and Van-Lawick Goodall Beautiful films, somewhat technical. Subtitles classify calls viewed with social contents.	
5. Thomas Struhsaker's movies of The Red Colobus	The Rockefeller Univ. Box 72, Film Service 1230 York Ave. New York, NY 10021
6. In Search of the Great Apes 1975	National Geographic Society Catalog
7. Jane Goodall: Studies of the Chimpanzee 1976-1977. (5 educational films & teacher guides)	National Geographic Society Catalog
8. Survey of the Primates 30 min.	Borrow from Prince George's Community College

9. Wild Child	Prince George's & Martin Luther King Libraries
10. The First Signs of Washoe. 59 min. color (Shows experimental results of attempts to teach chimpanzees American Sign Language & computerized symbol systems.) 1976	Time-Life Multimedia Box 32-48 6th Ave. at 50th St. Time Life Bldg. New York, NY 10020
11. Teaching Sign Language to the Chimpanzee, Washoe. 48 min. (A detailed examination of the experiments involving American Sign Language.) 1973	B & W Penn State Univ. PCR 17 Willard Bldg. University Park, PA 17802
12. Mammals, Primates, and Man. Filmstrip cassette (Part I, "The Family of Primates," traces the major developments in the evolution of animal life and describes the characteristics unique to mammals and primates, including man. Part II, "The Family of Man," explains the adaptations primates have made to live successfully in their ecological niches.)	Educational Dimensions Group Box 126 Stanford, CT 06904
13. Monkeys, Apes, and Man. 52 min. 1971	National Geographic Society Educational Services Catalog

Note: Most of the films can be rented through the Pennsylvania State University, Audio Visual Service, Special Services Bldg.
University Park, PA 16802; (814) 865-6314

CLASSROOM ACTIVITIES FOR PRIMATE BEHAVIOR

1. "Monkeys, Apes and Humans"--a three day program for high school students conducted at the zoo and the National Museum of Natural History illustrating basic concepts of primate behavior and human evolution. Students learn to observe and collect data on primate behavior, formulate hypotheses based on observation of living and skeletal forms, and compare and contrast the physical and social development of monkeys, great apes, and humans. (See attached description)

2. For young students, have them run races knuckle-walking and then knuckle-walking but carrying a lunch box in one hand. Discuss skeletal changes when becoming bipedal and the advantages of bipedalism for carrying.

3. Have students go home and find a dog or cat to compare themselves to: Look at the paws vs. hand and feet; limbs and locomotion; placement of the head; teeth. Then using pictures, zoo non-human primates, or skeletons of primates at the National History Museum, do a similar comparison.

4. Have students examine the primate skeletal materials in the Naturalist Center, National Museum of Natural History (open Wed. - Sat., 10:30 - 4; Sunday 12 - 5).

5. Have students first tie their hands so that they can flex fingers and thumb together

but not oppose the thumb; then have them tape the thumb down completely. What activities can they do or not do with each "taping." Patch one eye to simulate the lack of stereoscopic vision.

6. Have students do group pantomimes of different non-human primates and have class guess which non-human primate is being represented.
7. Have students take photographs or slow-motion film of a person walking. Then do the same with the person trying to knuckle-walk. Finally, film a gorilla knuckle-walking in the zoo. Compare the results.
8. Have students map where present populations of non-human primates are living and what the environment is like. This should help dispel the stereotype of all monkeys and apes living in jungles and eating bananas.

(This bibliography was originally prepared by JoAnne Lanouette for the Anthropology for Teachers Program, 1978-82.)

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The National Anthropological Archives (NAA), organized in 1965 as part of the Smithsonian's Department of Anthropology in the National Museum of Natural History, incorporated the archives of the former Bureau of American Ethnology. It serves as a depository for the records of the Department of Anthropology and its predecessor organizations and collects documents relating to all cultures of the world and the history of anthropology, and makes these available for research. The manuscript collection dates from about 1848 to the present and includes some 40,000 individual manuscript items described under about 5,000 main items in an indexed card catalog. ***The Catalog to Manuscripts at the National Anthropological Archives***, 4 vols., 1975, has been published by G. K. Hall and Co., 70 Lincoln St., Boston, MA 02111 This title can be found in many libraries. ***The Guide to the National Anthropological Archives, Smithsonian Institution*** by James R. Glenn is available in the NAA.

The photographic holdings of the National Anthropological Archives are estimated at 90,000 items, and most are dated between 1860 and 1930. A general file of black-and-white prints relating to the North American Indians includes portraits of individuals and of groups as well as pictures illustrating dwellings, clothing, industries, and other arts and activities. Other photographic series relate to non-Indian cultures and to the work of specific anthropologists and other individuals. Two available listings of frequently requested photographs are: Selected Portraits of Prominent American Indians; Selected Photographs Illustrating Material Culture around the World; and Selected Photographs Illustrating North American Indian Life. For further information on purchasing photographs, write or call the National Anthropological Archives, National Museum of Natural History, MRC 152, Washington, D.C. 20560; (202) 357-1976.

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Winter 1996

Information from the

National Museum of Natural History

SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

FILMS FOR TEACHING ETHNICITY

In the 1960s the landmark publication of "Myth of the Melting Pot" by Nathan Glazer and Daniel Moynihan drew attention to ethnicity as an enduring feature within American society. Despite studies that periodically rediscover this phenomena, many Americans and non-Americans continue to be surprised by the persistence of ethnic cultures in the United States. The following recent films use innovative approaches to examine various issues relating to ethnicity and ethnic identity among Americans.

These films do not constitute a complete list of recent films dealing with ethnicity or specific ethnic groups. For information about additional films and resources, consult your school or library media specialist for distributor's catalogues and for indexes such as *American Folklore Films and Videos: An Index*, compiled and published by the Center for Southern Folklore.

AMERICAN TONGUES. 1987. Louis Alvarez and Andrew Kolker (60 minutes).

It is a commonplace that Americans share the same official language even though Bostonians are often identified by a single phrase ("park the car") and New Yorkers by the fact that they "schlep" rather than "carry." "American Tongues" takes an often humorous look at these and other aspects of language diversity in America. The varied historical causes and social consequences of the fact that Americans speak English differently are explored. The film not only presents regional speech or "dialects" of English, but explores the intimate and taken for granted relationship between how people speak, how they think about themselves, and how they are judged by others. The filmmakers are sensitive to speech not only as the means by which we communicate, but as the principle medium through which we interact and negotiate issues of trust and character. What might otherwise be dry observations about these social aspects of speech are brought to life through voices as diverse as a Tangiers Island waterman, an Italian-American from Boston's North End, and a Kentucky backwoodsman.

Distributor: The Center for New American Media, 524 Broadway, 2nd Floor, New York NY 10012/ (212) 925-5665.

CELEBRATION. 1988. Karen Kramer (30 minutes).

Every year on Labor Day the largest Caribbean community in the United States celebrates carnival along Eastern Parkway in Brooklyn. The event, which brings together Caribbean immigrants from virtually every island, is a spectacle to rival the pre-Lenten bacchanal that has been celebrated in Trinidad and other islands since the days of slavery. Kramer aptly captures the spirit of the event, coupling infectious calypso rhythms with the striking visual displays of the carnival bands, costumed performers, and rocking and raucous crowds. But the film does more than simply confirm the familiar capacity of Caribbean peoples for celebration. The event itself becomes a window into the thoughts and feelings of expatriate West Indians as they are interviewed during preparations for the carnival. Through these interviews the viewer comes to appreciate the importance of carnival to people determined to maintain their sense of identity and their links with West Indian culture.

"Celebration" presents a mosaic of ethnic experiences in the U.S. in a novel way. Carnival in Brooklyn brings together Jamaicans, Antiguans, Haitians, and Barbadians, although Trinidadian immigrants are at the core of the pageantry of the event. This island diversity serves to remind us of an often overlooked cultural difference within urban American black communities (e.g., between West Indians and Afro-Americans). For teachers interested in exploring this difference with their students, this is an upbeat film that easily holds the viewer's attention.

Distributor: Erzulie Films, 22 Leroy St., New York NY 10014/ (212)691-3470.

FAMILY GATHERING. 1988. Lise Yasui (30 minutes).

In "Family Gathering," Lise Yasui, a third-generation Japanese-American, uses home movies, archival film, family photos, and interviews with family members to chronicle the tale of a Japanese-American family, begun when her grandparents immigrated to the U.S. during the beginning of the century. In the early years the Yasui family story was the embodiment of the American dream: a successful family business; community leadership; and children, raised in America, attending college and becoming doctors and lawyers. However, the upheaval caused by World War II, the resulting anti-Japanese sentiment in the U.S., and the forced relocation of the Yasui family to the internment camps, had lasting consequences, the scope of which Lise Yasui discovered only while making the film.

Lise Yasui's straightforward narration is filled with warmth and honesty and fully complements the images she presents. In this film an ethnic filmmaker examines her own family and in the process reveals the consequences of ethnic intolerance.
Distributor: New Day Films, 853 Broadway, Suite 1210, New York NY 10003/ (212)477-4604.

MADE IN CHINA. 1985. Lisa Hsia (30 minutes).

Chinese-American filmmaker Lisa Hsia grew up in suburban Chicago, a typical American kid. She was more involved with the concerns of American popular culture than with her Chinese heritage, her experience of Chinese culture limited to Sunday evening Chinese dinners in Chicago's Chinatown. It was with a sense of personal and ethnic discovery that Hsia traveled to China following college to learn Chinese and to discover her roots. While living with distant cousins in Beijing, she tries to learn what it is to be Chinese by attempting to become a good "daughter" in her cousins' household and by trying to absorb the sights and sounds of the land of her ancestors. Instead she discovers a little about the complexity of culture, as she learns that being Chinese-American does not necessarily make it easier to live in China.

Hsia chronicles her journey of self and cultural discovery with humor and off-beat touches, which result in a very personal and accessible film.

Distributor: Filmakers Library, Inc., 133 E 58th St., Suite 703A, New York NY 10022.

ZIVELI: MEDICINE FOR THE HEART. 1987. Andrei Simic and Les Blank (51 minutes).

"Ziveli: Medicine for the Heart" by anthropologist Andrei Simic and filmmaker Les Blank explores the characteristics of ethnicity among a European-derived community--the Serbians of Chicago. As its subtitle suggests, the film is an evocative look at Serbian-Americans as they experience their own ethnicity through traditional music, dance, food, and family celebrations. Life history narratives of immigrant Serbs, the close relationship between family and church, and other historical background on Serbian culture are skillfully woven into contemporary scenes in which identity is celebrated. The return to Serbia (Yugoslavia) by third-generation Serbian-Americans is presented as a kind of pilgrimage in which younger members of the ethnic group claim their culture. The film is an excellent vehicle for exploring evidence of cultural diversity in America.

Distributor: Flower Films, 10341 San Pablo Ave., El Cerrito CA 94530; (415) 525-0942.

Prepared by:

John Homiak and Wendy Shay
Human Studies Film Archives
Smithsonian Institution

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ANTHROPOLOGY OUTREACH
AND PUBLIC INFORMATION
DEPARTMENT OF ANTHROPOLOGY
SMITHSONIAN INSTITUTION

Information from the

National Museum of Natural History

SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

WHAT'S NEW IN HUMAN EVOLUTION

The last few years have witnessed dramatic shifts in the reconstruction of our family history. Just when the basic outline of the story seemed well established, new data appear to contradict some of the well-known scenarios. The new data derive not only from new fossils, but also from new ways of looking at already known fossils and sites, as well as from new analytical techniques from the physical and biological sciences. The latter range from ways of dating fossil sites too old for radiocarbon but too young for potassium-argon determinations, to reconstruction of ancestry through similarity in DNA, to a better understanding of the hyena's contribution to the fossil record. As a result, we must reconsider the definition of "humanness" and adopt a more objective, and distant view of our ancestors.

New Members of the Human Family

Some of the newest members of the human family (Hominidae) have been in the literature longer than any African fossils and, in fact, are not fossils at all. In several recent publications, as well as in the *Encyclopedia of Human Evolution and Prehistory*, Delson and Tattersall have placed the chimpanzee (Pan), gorilla (Gorilla) and orangutan (Pongo) within the human family, rather than in a family of great apes (Pongidae). Other authors (e.g. P. Andrews in Delson, ed., 1985, *Ancestors: The Hard Evidence*: 14-22) would group humans in a sub-family (Homininae) with African apes but not with the Asian orang. In the most extreme rearrangements of the primate kinship chart, supported by recent DNA studies (*Science*, 10/16/87, 238: 273-275), chimpanzees are more closely linked to humans than they are to gorillas.

Although those who were troubled by the ape in our ancestry will not welcome the modern African apes to the family reunion, the reclassifications make sense for several reasons. First, a re-examination of comparative skeletal morphology shows that in such features as eyebrows, shape of sinus cavities, orientation of canine teeth, size differences in upper incisor teeth, and the relationship of bones in the roof of the mouth, humans (living and fossil) and the African apes share common features not shared by orangs. Second, studies of similarities in DNA group African apes with humans rather than with orangs, and suggest that the latter may have branched off the family tree up to 10 million years before the split between African apes and humans. Third, the Miocene fossil evidence of Asian and African apes, 18 to 8 million years ago, suggests that Asian apes, similar in some respects to orangs, formed a distinct and diversified lineage in Asia and southeast Europe by 14 million years ago (e.g. Sivapithecus, Ramapithecus). Evidence of a distinct lineage of bipedal humans, however, is not found before 5 million years ago, and then only in Africa.

Those who argue for a closer relationship between humans and African apes have been further stimulated by discoveries of several groups of west African chimpanzees who use stone tools and other implements to crack nuts. Not only do the chimpanzees select stones or wooden clubs of differing hardness, depending on the kinds of nuts they intend to crack that day, but they appear to have a mental map of all the discarded tools in their terrain, so that they can swing by and pick up the nearest tool of the appropriate material on their way to a nut tree (*Journal of Human Evolution* 13: 415-440 and 15: 77-132).

New Fossils Negate Old Theories

New fossil discoveries from Kenya and Tanzania have also upset previous reconstructions of the human family tree. In 1985 (*Nature* 316: 788-792), Brown, Harris, Leakey and Walker published a description of the most complete early hominid skeleton ever found: that of a ca. 12 year-old Homo erectus boy, who, although not fully-grown, was already almost 5'6" tall at the very beginning of Homo erectus times, ca. 1.6 million years ago! Since we had imagined that members of this species were short as well as primitive in appearance, the implication that Homo erectus individuals may have attained an adult height of 6 feet is revolutionary. What new food source did Homo erectus exploit in order to sustain this rate of growth for the first time in hominid history? In addition, the pelvis of the boy from Nariokotome on the west side of Lake Turkana is considerably narrower than the male pelvis of today, implying that erectus infants were as underdeveloped or 'altricial' at birth as ours are, since an infant with a full-grown erectus brain would not have fit through the birth canal.

The erectus boy differs dramatically from another new, but more fragmentary adult skeleton from Olduvai Gorge, announced in May, 1987 by Johanson and colleagues (*Nature* 327: 205-209). Although dated only about 200,000 years earlier than the erectus boy, the Olduvai skeleton, provisionally attributed to a previous human species, Homo habilis, was as short as the "Lucy" fossil (Australopithecus afarensis) of more than a million years earlier (3.0 million years ago) and had comparably long arms. The new fossil seems to confirm the "punctuated equilibrium" model of human evolution: long periods with little change in morphology followed by rapid bursts of dramatic change in size, shape, and lifestyle. Like the erectus boy, however, the Olduvai skeleton raises more questions than it answers. If the first assemblages of chipped stone tools now dated to 2.5 to 2.0 million years represent a new way of making a living in savanna environments, why are the hominids like Lucy who date from before this event so similar to the ones who lived in east Africa at 1.8 million years ago? Have we grouped fossils into "Homo habilis" that don't belong together? Are the fossils we are calling Homo, because of expanded brain cases and a presumed dependence on tools and cultural behavior, in fact not responsible for the tools after all?

Curiously, the most dramatic shifts in the hominid lineage at the time when stone tools first appeared concern not the presumed ancestors of Homo erectus, but their cousins, the robust australopithecus group. Until the publication of the "black skull" from the west side of Lake Turkana by Walker and colleagues in 1986 (*Nature* 322:517-522, *Discover*, September 1986: 87-93, *Science* 233: 720-21), robust australopithecus individuals, with their "nutcracker" jaws, large grinding molars, gorilla-like crests, and flat faces, were thought to represent a specialized dead-end in human evolution that evolved only after 2 million years ago in response to competition from more "advanced" early humans (Homo habilis) wielding stone tools. The extremely robust "black [manganese-stained] skull", however, is 2.5 million years old! While not as flat-faced or as large-brained as later forms, the "black skull" had molar teeth and a bony skull crest as large or larger than any of the hyper-robust Austalopithecus boisei forms from east Africa, such as Zinjanthropus from Olduvai. The new skull shares some primitive features with the earlier form, Austalopithecus afarensis (Lucy and the "first family"), but relatively few with its presumed contemporary, A. africanus ("Mrs. Ples.") from south Africa, or with later representatives of the genus Homo. How are all these fossil forms related to one another? Many scholars agree (see *Science News* 7/4/87 p.7) that the robust australopithecines must now be derived directly from afarensis. But is Homo, who only appears after 2 million years ago, also derived from afarensis, and if so, is africanus a side-branch or an intermediate ancestor? And finally, who made the first stone tools at 2.5 to 2.1 million years ago, at Kada Gona (Ethiopia), Omo (Ethiopia) and Senga (Zaire)? (No stone tools are known from this time range in South Africa or in association with africanus). Was it a robust australopithecus or an undiscovered human ancestor?

The new fossils concur with several re-analyses of the behavioral and physical evidence for early human adaptations. Early humans were not simpler versions of ourselves but a group of animal forms with no living analogue. To live on the east African savannas, they probably had to be able to exploit underground tubers, and small animal prey, but the simple stone tools they made did not change for a million years. While Homo erectus may have had a long period of childhood dependency and learning, considerable controversy exists as to whether Homo habilis and Australopithecus matured in an "ape" or "human" growth pattern (*Nature* 317:525-527, 323:327-330). Rather than representing "home bases" and a modern pattern of food-sharing and division of labor, the evidence of the earliest archaeological sites is now seen to reflect processing of animal bones by hominids at localities where large carnivores were also active and where no clear evidence of human campsite activities is found (Potts 1984, *American Scientist* 72: 338-347; Bunn and Kroll 1986, *Current Anthropology* 27(5): 431-452; Binford 1987, *Current Anthropology* 28(1):102-105).

The Origin of Modern Humans

About 1 million years ago or slightly earlier, the first humans spread out of Africa via the Middle East into southern and eastern Asia, and, finally, Europe, the northernmost continent. To do so, they had to learn to cope with colder winters and shorter growing seasons in which increased reliance on the meat and fat of large animals would have been essential. Yet many sites that were once thought to demonstrate this reliance, along with the hunting competence of later Homo erectus, have recently been questioned. In a series of 1985-6 articles in *Current Anthropology*, (26(4):413-442; 27(5):453-475) Binford and colleagues argue that the Chinese site of Zhoukoudian (Choukoutien), "the cave home of Beijing [Peking] man" was also the cave home of two species of hyena, wolf, tiger and bear. While humans also left their stone tools in the cave, the food habits of these carnivores were probably responsible for much of the bone accumulation in the cave, as well as for the damage to the human skulls, formerly interpreted as evidence of cannibalism. In addition, the "ash layers" cited as evidence for human control of fire are probably the remains of huge guano accumulations, some spontaneously ignited and burning over long periods, so that "the 'cave home of Beijing man' may well have been one of the first 'homes' in the temperate zone to have had 'central heating'" (1985: 429). As Binford's conclusions are strongly contested by other scholars, both in the US and abroad, a definitive reconstruction of life in China in Homo erectus times must await further data from Zhoukoudian and other sites.

In Europe, the site of Torralba is interpreted in the Time-Life book on *Early Man*, as well as in the Smithsonian's Hall of Ice Age Mammals and the Emergence of Man as a place where Homo erectus was thought to have used fire to drive elephants into a bog and slaughter them. Although stone tools indicate some human activity at the site, recent restudy of the evidence for fire, hunting, and butchering of the elephants and other animals suggests that the large mammals could well have died a natural death, since hearths were absent, and previous identifications of stone tool "cutmarks" are now in doubt.

Even the European Neandertals, whose large brains qualify them for inclusion in our own species, have been "dehumanized," their ability to speak clearly and plan ahead called into question. In a review article in the 1986 *Annual Review of Anthropology* (15:193-218), Trinkaus demonstrates that Neandertals were more cold-adapted and much more robustly built than Homo sapiens sapiens, indicating that their ability to find cultural rather than biological solutions to environmental stress was considerably less than that of early modern human (Homo sapiens sapiens). The "early moderns", on the other hand, were more "advanced" in their cultural behavior than we had previously imagined. Not only did they carve images of their world and decorate themselves with beads and pendants, but they also built boats and sailed them to Australia, New Guinea, and New Ireland, where sites, some with painted images, are known from 32,000 years ago (*Nature*, 8/20/87, 328:666).

Surprisingly, in view of its relatively recent date, the origin of modern humans is one of the most debated topics in palaeoanthropology (*Science*, 9/11/87, Vol. 237:1292-1295). Where is the birthplace of "Cro-magnon" and other peoples who appear in Europe beginning around 35,000 years ago and whose achievements culminate in the great painted caves of Lascaux and Altamira? Two new lines of evidence lead us back to the place where the human story began. Studies of mitochondrial DNA in modern human groups suggest that all modern humans are descended within the last 200,000 years from an African ancestor. Since mitochondria are present in eggs but not in sperm, only female ancestry is reflected in the pattern. If this ancestral modern woman bred with Neandertal or other males, whose mitochondria are not heritable, this intermixture would not show up in the mitochondrial DNA, although it would be reflected in the more slowly-evolving nuclear DNA. Many scholars, however, including Trinkaus, see the contribution of Neandertals to modern humans as minimal. The physical differences are too great, and the replacement time too short, to envision a slow transformation from one form to the other.

Some anthropologists argue that the molecular clock does not keep good time, or that alternative explanations for why African populations are more diverse genetically than the entire rest of the human species can be developed (*Science* 10/2/87: 238:24-26). Yet the mitochondrial evidence may well be in agreement with a second source of evidence: that of the fossil record itself. At two sites in South Africa, Border cave and Klasies River Mouth, fossils with chins and small modern teeth have been dated to the end of the last interglacial, about 75,000 years before the first appearance of modern humans in Europe. Skeptics (e.g. Binford, 1984, *Faunal Remains from Klasies River Mouth*) have questioned the dates or argued that younger, more modern skeletons may have been buried or mixed into older deposits. Recent stratigraphic work at Klasies, however, shows that the modern human fossils there are contemporary with the earliest archaeological levels at the site, levels whose soils and associated molluscs are linked to the warmer climate of the last interglacial. More "archaic" but still large-brained Homo sapiens fossils are known from even earlier deposits at Omo (Ethiopia), Ndutu, Laetoli, and Eyasi (Tanzania), Florisbad (South Africa) and several other sites. A few scholars point to the existence of transitional populations between archaic and modern humans at several sites in eastern Europe and southeast Asia, but these can also be seen as evidence for the intrusion and interbreeding of new populations. As a result of several converging lines of evidence, an African ancestry for all modern humans appears likely.

General Considerations

All of these new discoveries and interpretations, whether due to new fossils, new analytical techniques, or new ways of looking at old data, reflect changing views of evolution in general, and human evolution in particular. If new evolutionary advances are rare events, followed by long periods of stasis, then dramatic differences between early human groups only 200,000 years apart make sense, as do long periods when both the biology and behavioral adaptations of hominid species were stable. The rapid replacement of Neandertals by modern humans also fits this model.

A second trend in these new scenarios is the progressive refusal to recognize modern human behaviors in our ancestors. Like scholars in the early twentieth century, modern anthropologists are struck by the great gulf that separates us from the primitive past rather than by the few traits which unite everything grouped in the human family (including possibly, the living African apes). Where to draw the line between "human" and "non-human"? The answer may not lie entirely in the fossil record, but in the ways scientists and philosophers think about themselves, their evolutionary past, and the world around them.

Alison S. Brooks

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National Museum of Natural History
SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

MODERN HUMAN ORIGINS -- WHAT'S NEW WITH WHAT'S OLD

In a lecture at George Washington University this September, Richard Leakey argued that one of the most controversial and least well-understood events in human evolution occurs toward the end of the story. Where, when, and why did modern humans like ourselves first appear, and how did they come to occupy most of the earth?

Study of this stage of evolution is not new; in fact, it began more than 160 years ago with the first discovery of Neandertal fossils in Belgium in 1830. As early as 1868, the co-existence of extinct animals such as mammoths with anatomically modern but very robust humans was documented at the site of Cro-Magnon, in southern France.

Why don't we know more after all this time about an event so close to our own era? And why are the arguments over this event so bitter?

WHAT'S SO MODERN ABOUT MODERN HUMANS?

Anatomically modern humans are distinguished from their predecessors by their relatively "gracile" (less robust or less muscular) skeletons and smaller teeth. Males, in particular, became smaller and overlapped the female size range to a greater extent than previously. Although brain size did not increase in moderns from the preceding "archaic" stage, the braincase itself became taller, less elongated from front-to-back, and more sharply flexed at its base, where it joins the face. In essence, the face became almost completely situated under the braincase, rather than sticking out in front of it as in earlier human ancestors and other primates. Smaller teeth also left the chin sticking out in front, and reduced the need for heavy browridges to take up some of the stress of chewing. (If you put your fingers on your remnant "browridges" over the outer corner of your eyes and clench your teeth, you can feel the chewing stress transmitted to the browridge area). Archaic *Homo sapiens*, with modern-size brains but big brow-ridges, large faces, and large teeth, occupied Europe, Asia and Africa before the appearance of modern *Homo sapiens*. The term "Neandertals" refers in some theories to one relatively isolated, cold-adapted population of these "archaics." In other theories, Neandertals refers to *all* later "archaics," ca. 130,000 to 40,000 B.P. (before present).

CANDELABRAS AND HATRACKS

Throughout this century, two basic variants of the story have vied for acceptance by the scientific community. The "candelabra" view recognizes only one major branching of the human line. After the initial dispersal of humans to the three major Old World continents, beginning as early as 1.1 million years ago with the species *Homo erectus*, the populations of each region evolved in parallel fashion into modern humans. Some migration or gene flow between the regions assured that new characteristics appearing in one region would eventually spread to all. In this theory, most of the immediate ancestors of the modern humans of Africa are found in Africa, while the immediate ancestors of the Chinese are found in China and so forth.

According to this view, the immediate ancestors of Europeans are their predecessors on that continent--namely the Neandertals. The current version of the "candelabra" theory is referred to as "multi-regional evolution" (MRE), because it allows more migration from region to region than earlier versions.

In a contrasting view, known as the "hatrack" theory, a single main stem or center pole leads to modern humans, with branches at intervals through time representing evolutionary dead ends. According to this theory, the Neandertals of western Europe are one such dead end; the "Peking Man" or *Homo erectus* fossils of east Asia are another. Until recently, the central stem was always given a European or Near Eastern identity, through such fossils as "Piltdown" (a now-discredited forgery), Swanscombe (a large English skullcap without a face, dating to a period just before the earliest Neandertals), or the Skhul fossils from Israel. The central role of Europe in human evolution was attributed by some to the influence of a colder climate, a limited growing season, and more reliance on both hunting and food storage, all of which would have promoted intelligence and growth of the brain.

In the current version of the "hatrack" theory, however, the central stem is African, and all the earlier fossils of other continents constitute the dead ends of human evolution. Since, in this view, all anatomically modern humans derive from recent African ancestors, the modern theory is called the "out-of-Africa" hypothesis.

How can two such disparate views continue to co-exist? Why does not the data exclusively support one or the other? And why has the "hatrack" school shifted its focus from Europe to Africa? Three new D's--new dates, new data (fossil and archaeological) and new DNA studies--have combined to create a heightened level of argument over modern human origins.

DATING THE DATA

By 35,000 years ago, the shift to modern humans was virtually complete throughout Europe, Asia, Africa and even Australia. The most accurate dating technique for the later periods of archaeology, radiocarbon, gives good results back to about 35,000, but not much older. Some dates of 38 to 40,000 are acceptable, but dates in the 40,000 or older range are decidedly dubious. Most of the story of modern human origins lies beyond 40,000 years ago. Until recently, there were no reliable ways to determine the age of anything between 40,000 and 200,000 years ago.

Recently, however, a range of new techniques have come into general use for exactly the period when modern humans must have emerged, between 200,000 and 40,000 years ago. These techniques include: 1) measuring the accumulation of "radiation damage" from soil radiation in buried crystalline materials such as flints or quartz sands (thermoluminescence), 2) measuring the decay of uranium which soaks into buried bones and teeth from groundwater (uranium series), or radiation damage in the crystals of tooth enamel (electron spin resonance), and 3) studying the decay of the proteins encapsulated in hard tissues of fossil animals such as mollusc shells, bones, teeth, and ostrich eggshells (amino acid racemization).

Unlike radiocarbon, none of these techniques is entirely independent of the burial environment. Thermoluminescence and electron spin resonance dates can be thrown off by inaccurate measurement of the soil radiation or by heating or re-exposure of the sample before the archaeologist finds it. Protein decay rates are dependent on temperature, which is difficult to estimate for 40,000 to 200,000 years ago. And the uranium which soaks into bones and teeth can also wash out again. Using two different techniques to date the same site can help avoid these problems, at least when the two sets of results agree.

The effect of the new dating techniques has been to make many sites and fossils in Africa earlier than was previously thought. The European dates did not change quite as much, because the ebb and flow of ice ages had provided a chronology that tied most of the sites together, even in the absence of exact numbers.

Once the chronology of Africa was based on its own internal sequence of dates, comparative faunal extinctions, and climate changes, it became obvious that the earliest fossils in Africa with "chins" and small teeth were much older than the Cro- Magnons of Europe. In a paper given last spring on ostrich eggshell dates, I and my colleagues suggested that several of the most important early African sites with modern humans (Klasies River Mouth and Border Cave) date to as much as 105,000 years ago or older. Modern human teeth at Mumba shelter in Tanzania were dated to ca. 130,000 years by uranium series.

Meanwhile new dates for Zhoukoudian (Peking Man sites), and other sites from China and Java suggest that east Asia was occupied exclusively by the more primitive species Homo erectus until about 300,000 years ago. The new Chinese fossils announced this year that supposedly represent a transition between erectus and sapiens do not show that this transition happened in China first, as several newspaper reports seemed to suggest. That the earliest modern humans were African seems quite well-established, although very few sites have been dated thus far.

In Europe, the principal effects of the new dates have been twofold. One is to demonstrate the great antiquity in Europe of the Neandertal-type long face, big nose, and flattened bulge at the back of the head. The oldest fossil now referred to as Neandertal (Le Biache, France) was discovered in 1976 and is about 190,000 years old, while older fossils (for example, Arago in the Pyrenees) with some Neandertal characteristics, date to the 300,000s or older. Secondly, newer, more precise radiocarbon dates from the end of Neandertal times, show that, in particular areas, the transition from Neandertal to Cro-Magnon was quite abrupt. A Neandertal from St. Cesaire in France, found in 1979, is about 35,000 years old, while the Cro-Magnon fossils probably date to at least 34,000, based on comparisons with the Pataud site next door. Such an abrupt transition does not leave enough time for evolution to have occurred in place. In addition, the oldest modern human fossils and archaeological sites of the Aurignacian culture of Cro-magnon are found in eastern Europe just before 40,000 years ago, while Neandertals still lived in the west, just what one would expect if modern humans invaded Europe from Africa via the Near East. And in the Near East itself, modern humans from Qafzeh, in Israel, excavated in the 1960s, have been dated to ca. 92,000 years ago by thermoluminescence on burned flints, and a similar antiquity was suggested for at least some of these fossils by our work on ostrich eggshells.

One problem in the Near East remains the chronological relationship of the Qafzeh modern humans to Neandertals. What might explain Neandertal dominance of this region after a brief period of modern human occupation at 92,000 years? One possible answer lies in the tiny bones of birds, rodents and insectivores found with the human fossils. Earlier modern humans are accompanied by tropical African birds, mice, voles and so on, while later Neandertals are accompanied by cold-adapted animals from Eurasia.

If Neandertals were the cold-adapted archaics, and the earliest modern humans were tropical, this shifting pattern implies that the distribution of the two populations was originally limited by ecological considerations, and that the Near East represented a boundary zone that shifted as the world's climate changed. By 40,000 years ago, when modern humans returned to dominate the region, they seem to have invented a way to get around this ecological limitation. The animals found at the post-40,000 year-old modern human sites remain primarily cold-adapted.

THE 'AFRICAN EVE' HYPOTHESIS

That humans were "modern" in appearance in the tropics long before these characteristics appear in Europe seems confirmed by the new dates and data. But what is the relationship of the first modern humans in Africa to the later ones who occupied Europe after 35,000 years ago? This relationship is the hottest part of the current controversy.

In 1987, geneticist Rebecca Cann and colleagues proposed that a recent migration out of Africa within the last 200,000 years had totally replaced all other human populations. None of the "archaic" East Asians, or the Neandertals of Europe had left any descendants at all. All modern humans share a recent African ancestor. The data used to support this hypothesis did not come from the fossil record, or from the dating lab, but from analysis of genetic differences among people living today.

The most common and abundant genetic material (DNA), which occurs in the nucleus of the cell, changes too slowly to measure recently evolved differences--even comparing humans to chimpanzees reveals a less than 1% difference between the two species. But mitochondria, small organelles within cells that are important in converting food to energy, contain a more rapidly changing form of DNA. Since sperm consist almost entirely of nuclear DNA and lack mitochondria, your mitochondria derive entirely from your mother via the ovum. A family tree of human genetic similarities, based on mitochondrial DNA (mtDNA), reflects only female ancestry, hence the "Eve" in the hypothesis.

This last common ancestor of all humans is thought to have been African because Africans are more variable in their DNA than the peoples of other continents, which suggests that they have been in place the longest. Furthermore, some genetic variants are unique to Africa, while all the variants on other continents are found in Africa as well. If Neandertals from Europe or Homo erectus from China contributed to our ancestry, where is their unique DNA?

What about "Adam"? A similar study was done on the genetics of the Y-chromosome, which appears to determine maleness but little else. Family trees based on similarities in genetic make-up of the Y-chromosome reflect only male ancestry, since women do not have one. The same pattern was observed--greater variability and unique patterns in African populations, but no unique patterns outside that continent. The most variable DNA in both studies belonged to the small isolated populations of hunter-gatherers in the Kalahari Desert (!Kung) and Zaire forest basin (Mbuti, Aka, Efe) respectively.

At first, the major debate was over possible errors or omissions in the sample (use of African-Americans instead of Africans, assuming little admixture in the maternal line) and the timing of the dispersal from Africa. Using the degree of differentiation developed within Australia and New Guinea (first colonized ca. 50-40,000 years ago), or among the populations of the Americas as a guide, it was estimated that human mtDNA diversifies from a common ancestor at a rate of 2-4% per million years. Since the total amount of difference observed in modern populations was only about 0.57%, this implies a time scale of 140-290,000 years since all humans last shared a common ancestor.

More recently, the family tree itself has been questioned on statistical grounds. Given enough time and repeated tries, the computer program used to generate the published family tree can also generate alternative trees in which Africa plays a diminished role. The genetic basis for total replacement of all previous human populations by the descendants of "African Eve" appears to be in doubt, although this does not negate the importance of the early fossil evidence from Africa.

ANCIENT AFRICANS, WHOSE ANCESTORS?

What was the relationship between the Neandertals or other archaics of regions outside Africa and their successors? Is there any evidence of population movement from Africa to Europe or east Asia? Did the invaders interbreed with the older populations of these areas, or did they simply wipe them out? Much of the argument hinges on current analyses of the fossils themselves. Three issues are central: 1) who were the Neandertals (and what "explains" their robust body form), 2) are there any intermediate fossils between Neandertals (or archaics) and modern humans, and 3) are there regional continuities in facial shape or teeth that continue across the transition from archaic/Neandertal to modern.

Up through the early 1970s, many scholars tended to lump Neandertals with other archaics as having modern brains and large primitive faces (and teeth). Western European Neandertals, whose faces were longer and more projecting, and whose elongated heads appeared to have an "occipital bun" of bone at the back, were simply more extreme than others. It was widely suggested that "if you gave a Neandertal a shave and a haircut [and a shopping trip to J.C. Penny], you wouldn't recognize him on the New York subway."

In the 1970's Erik Trinkaus began a lengthy study of Neandertals from a new perspective--below the neck. His study suggested very strongly that all Neandertals, including those from the Near East but not the archaics from tropical environments and east Asia, shared a common and very unusual "post-cranial" form. Their bones, even the fingers and toes, were extremely thick and bore heavy markings for the muscle attachments that could not be duplicated in modern samples of skeletons. The joint surfaces were sometimes twice as large as the modern human average. Discovery of a pelvis from Kebara, in Israel, suggested that the way the body was carried was quite different, as the spinal column was more deeply indented into the back than in ourselves. Yet, from the same site, a hyoid bone, which attaches to the voice box, suggested that the movement of the throat, tongue, and voice box in producing speech was similar to ours, despite the greater distance in Neandertals between the neck and the back of the throat.

In addition, Neandertals, like other cold-adapted animals, had very large deep chests and short lower arms and legs, to better conserve body heat. New studies of the face suggested that the very long projecting face and huge, broad nose were distinctive; other large-faced archaics from Africa or East Asia had shorter, flatter faces, with more angulated cheek bones. The distinctions of Neandertals from other archaics appeared quite striking, and resulted in most scholars excluding fossils formerly grouped as "Neandertaloids" from this category. Neandertal morphology was peculiar: you would definitely notice it even on the N.Y. subway!

Are there any transitional fossils? In Africa, several fossils are intermediate between archaics and moderns. Even the early moderns themselves at Klasies River Mouth, for example, are described by Trinkaus as more robust in their limbs than Cro-Magnons of Europe. In Europe, the argument is very heated. Those who argue for interbreeding between Cro-Magnons and Neandertals (Wolpoff and Smith), or even for an indigenous evolution from Neandertals to Cro-Magnons (Brace), point to the less extreme characteristics of some later Neandertals, or to the presence of significant brow ridges and rugged large faces along with definite chins at modern human sites in central Europe.

Transitional or even archaic Homo sapiens fossils from Asia are quite rare; most of the best specimens from China have not been well-published in an accessible format. Regional continuities in Asia, however, are striking to proponents of the multiregional evolution theory (Wolpoff, Wu, Thorne, and Pope). If the earliest modern Asians came from Africa, why do the earliest ones we find already have the flat upper faces, and dental characteristics of Asians today? Why are the earlier archaic Asians also flat-faced? "Out of Africa" theorists (Stringer) argue that the flat faces and other features are either primitive features retained in that population, or simply adaptations to the cold dry Asian climate that are favored each time a new human population reaches the area.

REVOLUTION OR EVOLUTION?

In his recent book, *The Last Chimpanzee*, Jared Diamond argues that modern humans became fully modern in their behavior rather suddenly about 40,000 years ago. This "great leap forward" or "human revolution" is largely based on the perspective from Europe, where major changes in technology (blade and bone tools); economic strategies (ambush hunting, fishing); size of social networks; and symbolic activities (art) occurred over a few thousand years as the Cro-Magnons replaced the Neandertals.

The recovery of new sites, fossils and data dating to between 250,000 and 40,000 has accelerated since the 1960's. Even with the limited exploration of Africa to date, it seems that, like modern human facial shape, some of the modern behaviors of the "human revolution" appear well before 40,000 years ago in Africa. While the later Neandertals ran down their prey and stabbed it with sharpened sticks or an occasional stone-tipped spear, central and eastern Africans hafted small delicate stone points onto spear- or even arrow-shafts; made stone blades, backed triangles or crescents, barbed bone points, and other bone tools; engaged in regular fishing and ambush hunting; ground their food (and some pigments) with grindstones; scratched designs on ostrich eggshell fragments; and traded precious raw materials such as obsidian over more than 500 miles. Like the later Neandertals, the early modern humans also buried their dead with grave goods.

By 50-40,000 years ago, new data show that Africans wore beads of ostrich eggshell, and engaged in organized mining of precious raw materials. Elsewhere, modern humans had used boats to reach Australia, New Guinea, and New Caledonia, where rock art has been dated to 32,000 years ago. Outside of Europe, the "great leap forward" began earlier and was more like a slow jog, with occasional detours and backward movements.

BUT WERE THE CRO-MAGNONS AFRICAN?

Although modern humans appear to have developed earlier in Africa, physical anthropology and archaeology do not demonstrate migration of modern humans to Europe. Despite earlier claims for the fossils from Grimaldi, Italy, African characteristics such as nose shape and width, wide distance between the eyes, and forward projection of the mouth, do not occur in the early Europeans. Grimaldi itself is not only not "African" but is considerably later in time than the earliest modern Europeans--new dates suggest an age of less than 28,000 years. According to recent dates on archaeological sites, the Aurignacian culture of the Cro-magnons appears first in central and southeastern Europe, just before 40,000 BP, spreading to near Barcelona, Spain by ca. 38,000 and finally to France and Germany by 34,000. Southern Spain, near the straits of Gibraltar, is one of the last areas to make the transition from the Mousterian culture of Neandertals--archaeology does not suggest an invasion via this route. The big blades, thick scrapers, and bone points of the Aurignacian are quite unlike anything from the preceding Mousterian culture of Neandertals, so it was assumed that it came into Europe from outside. Yet there is nothing "outside" in this time range, either in the Near East or in north Africa, from which the Aurignacian can be derived. In much of Africa and the Near East, at ca. 40,000, the stone industries were characterized by finely-made small blades, many with narrow points created by blunting or battering the sides, or by small points with a tang or projection for hafting. The Aurignacian does show up in the Near East, but recent dates suggest that this is only after it is well-established in Europe, at about 34,000. The Near East may have been a migration corridor, but it was open in both directions.

CAN THIS CONTROVERSY BE RESOLVED?

The controversy over modern human origins is particularly heated because it concerns ourselves and our most recent history. The argument has been widely featured in the public media: *Time*, *Newsweek*, *The New York Times*, and at least two television specials on PBS. Unlike the controversy over earlier phases of human evolution, many of the voices expressed in these pieces are the voices of non-scientists, who argue that up to now, Eurocentric bias has suppressed recognition of our "true" heritage. While the discoveries of the past two decades have gone far towards demonstrating the priority of continents other than Europe in the evolution of modern humans, the data also suggest that this was not a simple event of evolution followed by migration in one direction. Replacement of earlier populations may not have been total. More and better dates and data, particularly from regions such as western Asia, Turkey and the Balkans, as well as Africa, may go far towards clarifying the complex interactions involved in this transition.

Excellent discussions on this topic can be found in recent journals:

Discover - September '92.
Scientific American - April '92, October '91, December '90.
Science - February, 7, April 3, May 29, June 12, 1922; August 23, 1991; March 11, 1988.
U.S. News and World Report - September 16, '91.

A bibliography on human evolution is available from the Anthropology Outreach and Public Information Office, NHB MRC 112, Smithsonian Institution, Washington, DC 20560.

Alison S. Brooks

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BODY RITUAL AMONG THE NACIREMA

The anthropologist has become so familiar with the diversity of ways in which different peoples behave in similar situations that he is not apt to be surprised by even the most exotic customs. In fact, if all of the logically possible combinations of behavior have not been found somewhere in the world, he is apt to suspect that they must be present in some yet undescribed tribe. This point has, in fact, been expressed with respect to clan organization by Murdock. In this light, the magical beliefs and practices of the Nacirema present such unusual aspects that it seems desirable to describe them as an example of the extremes to which human behavior can go.

Professor Linton first brought the ritual of the Nacirema to the attention of anthropologists twenty years ago, but the culture of this people is still very poorly understood. They are a North American group living in the territory between the Canadian Cree, the Yaqui and Tarahumara of Mexico, and the Carib and Arawak of the Antilles. Little is known of their origin, although tradition states that they came from the east....

Nacirema culture is characterized by a highly developed market economy which has evolved in a rich natural habitat. While much of the people's time is devoted to economic pursuits, a large part of the fruits of these labors and a considerable portion of the day are spent in ritual activity. The focus of this activity is the human body, the appearance and health of which loom as a dominant concern in the ethos of the people. While such a concern is certainly not unusual, its ceremonial aspects and associated philosophy are unique.

The fundamental belief underlying the whole system appears to be that the human body is ugly and that its natural tendency is to debility and disease. Incarcerated in such a body, man's only hope is to avert these characteristics through the use of the powerful influences of ritual and ceremony. Every household has one or more shrines devoted to this purpose. The more powerful individuals in the society have several shrines in their houses and, in fact, the opulence of a house is often referred to in terms of such ritual centers it possesses. Most houses are of wattle and daub construction, but the shrine rooms of the more wealthy are walled with stone. Poorer families imitate the rich by applying pottery plaques to their shrine walls.

While each family has at least one such shrine, the rituals associated with it are not family ceremonies but are private and secret. The rites are normally only discussed with children, and then only during the period when they are being initiated into these mysteries. I was able, however, to establish sufficient rapport with the natives to examine these shrines and to have the rituals described to me.

The focal point of the shrine is a box or chest which is built into a wall. In this chest are kept the many charms and magical portions without which no native believes he could live. These preparations are secured from a variety of specialized practitioners. The most powerful of these are the medicine men, whose assistance must be rewarded with substantial gifts.

However, the medicine men do not provide the curative portions for their clients, but decide what the ingredients should be and then write them down in an ancient and secret language. This writing is understood only by the medicine men and by the herbalists who, for another gift, provide the required charm.

The charm is not disposed of after it has served its purpose, but is placed in the charmbox of the household shrine. As these magical materials are specific for certain ills, and the real or imagined maladies of the people are many, the charm-box is usually full to overflowing. The magical packets are so numerous that people forget what their purposes were and fear to use them again. While the natives are very vague on this point, we can only assume that the idea in retaining all the old magical materials is that their presence in the charm-box, before which the body rituals are conducted, will in some way protect the worshipper.

Beneath the charm-box is a small font. Each day every member of the family, in succession, enters the shrine room, bows his head before the charm-box, mingles different sorts of holy water in the font, and proceeds with a brief rite of ablution. The holy waters are secured from the Water Temple of the community, where the priests conduct elaborate ceremonies to make the liquid ritually pure.

In the hierarchy of magical practitioners, and below the medicine men in prestige, are specialists whose designation is best translated "holy-mouth-men." The Nacirema have an almost pathological horror of and fascination with the mouth, the condition of which is believed to have a supernatural influence on all social relationships. Were it not for the rituals of the mouth, they believe that their teeth would fall out, their gums bleed, their jaws shrink, their friends desert them, and their lovers reject them. They also believe that a strong relationship exists between oral and moral characteristics. For example, there is a ritual ablution of the mouth for children which is supposed to improve their moral fiber.

The daily body ritual performed by everyone includes a mouth-rite. Despite the fact that these people are so punctilious about care of the mouth, this rite involves a practice which strikes the uninitiated stranger as revolting. It was reported to me that ritual consists of inserting a small bundle of hog hairs into the mouth, along with certain magical powders, and then moving the bundle in a highly formalized series of gestures.

In addition to the private mouth-rite the people seek out a holy-mouth-man once or twice a year. These practitioners have an impressive set of paraphernalia, consisting of a variety of augers, awls, probes, and prods. The use of these objects in the exorcism of the evils of the mouth involves almost unbelievable ritual torture of the client. The holy-mouth-man opens the clients mouth and, using the above mentioned tools, enlarges any holes which decay may have created in the teeth. Magical materials are put into these holes. If there are no naturally occurring holes in the teeth, large sections of one or more teeth are gouged out so that the supernatural substance can be applied. In the client's view, the purpose of these ministrations is to arrest decay and to draw friends. The extremely sacred and traditional character of the rite is evident in the fact that the natives return to the holy-mouth-men year after year, despite the fact that their teeth continue to decay.

It is to be hoped that, when a thorough study of the Nacirema is made, there will be careful inquiry into the personality structure of these people. One has but to watch the gleam in the eye of the holy-mouth-man, as he jabs an awl into an exposed nerve, to suspect that a certain amount of sadism is involved. If this can be established, a very interesting pattern emerges, for most of the population shows definite masochistic tendencies. It was to these that Professor Linton referred in discussing a distinctive part of the daily body ritual which is performed only by men. This part of the rite involves scraping and lacerating the surface of the face with a sharp instrument. Special women's rite are performed only four times during each lunar month, but what they lack in frequency is made up in barbarity. As part of this ceremony, women bake their heads in small ovens for about an hour. The theoretically interesting point is that what seems to be preponderantly masochistic people have developed sadistic specialists.

The medicine men have an imposing temple, or latipso, in every community of any size. The more elaborate ceremonies required to treat very sick patients can only be performed at this temple. These ceremonies involve not only the thaumaturge but a permanent group of vestal maidens who move sedately about the temple chambers in distinctive costume and headdress.

The latipso ceremonies are so harsh that it is phenomenal that a fair proportion of the really sick natives who enter the temple ever recover. Small children whose indoctrination is still incomplete have been known to resist attempts to take them to the temple because "that is where you go to die." Despite this fact, sick adults are not only willing but eager to undergo the protracted ritual purification, if they can afford to do so. No matter how ill the supplicant or how grave the emergency, the guardians of many temples will not admit a client if he cannot give a rich gift to the custodian. Even after one has gained admission and survived the ceremonies, the guardians will not permit the neophyte to leave until he makes still another gift.

The supplicant entering the temple is first stripped of all his or her clothes. In everyday life the Nacirema avoids exposure of his body and its natural functions. Bathing and excretory acts are performed only in the secrecy of the household shrine, where they are ritualized as part of the body-rites. Psychological shock results from the fact that body secrecy is suddenly lost upon entry into the latispo. A man, whose wife has never seen him in an excretory act, suddenly finds himself naked and assisted by a vestal maiden while he performs his natural functions into a sacred vessel. This sort of ceremonial treatment is necessitated by the fact that the excreta are used by a diviner to ascertain the course and nature of the client's sickness. Female client's, on the other hand, find their naked bodies are subjected to the scrutiny, manipulation and prodding of the medicine man.

Few supplicants in the temple are well enough to do anything but lie on their hard beds. The daily ceremonies, like the rites of the holy-mouth-men, involve discomfort and torture. With ritual precision, the vestals awaken their miserable charges each dawn and roll them about on their beds of pain while preforming ablutions, in the formal movements of which the maidens are highly trained. At other times, they insert magic wands in the supplicant's mouth or force him to eat substances which are supposed to be healing. From time to time the medicine men come to their clients and jab magically treated needles into their flesh. The fact that these temple ceremonies may not cure, and my even kill the neophyte, in no way decreases the people's faith in the medicine men.

There remains one other kind of practioner, known as a "listener." This witchdoctor has the power to exorcise the devils that lodge in the heads of people who have been bewitched. The Nacirema believe that parents bewitch their own children. Mothers are particularly suspected of putting a curse on children while teaching them the secret body rituals. The counter-magic of the witchdoctor is unusual in its lack of ritual. The patient simply tells the "listener" all his troubles and fears, beginning with the earliest difficulties he can remember. The memory displayed by the Nacirema in these exorcism sessions is truly remarkable. It is not uncommon for the patient to bemoan the rejection he felt upon being weaned as a babe, and a few individuals even see their troubles going back to the traumatic effects of their own birth.

In conclusion, mention must be made of certain practices which have their base in native esthetics but which depend upon the pervasive aversion to the natural body and its functions. There are ritual fasts to make fat people thin and ceremonial feasts to make thin people fat. Still other rites are used to make women's breasts larger if they are too small, and smaller if they are large. General dissatisfaction with breast shape is symbolized in the fact that the ideal form is virtually outside range of human variation. A few women afflicted with almost inhuman hyper-mammary development are so idolized that they make a handsome living by simply going from village to village and permitting the natives to stare at them for a fee.

Reference has already been made to the fact that excretory functions are ritualized, routinized, and relegated to secrecy. Natural reproductive functions are similarly distorted. Intercourse is taboo as a topic and scheduled as an act. Efforts are made to avoid pregnancy by the use of magical materials or by limiting intercourse to certain phases of the moon. Conception is actually very infrequent. When pregnant, women dress as to hide their condition. Parturition takes place in secret, without friends or relatives to assist, and the majority of women do not nurse their infants.

Our overview of the ritual life of the Nacirema has certainly shown them to be a magic-ridden people. It is hard to understand how they have managed to exist so long under the burdens which they have imposed upon themselves. But even such exotic customs as these take on real meaning when they are viewed with insight provided by Malinowski when he wrote:

> "Looking from far and above, from our high places of safety in the developed civilization, it is easy to see all the crudity and irrelevance of magic. But without its power and guidance early man could not have mastered his practical difficulties as he had done, nor could man have advanced to the higher stages of civilization."

From: Horace Miner, "Body Ritual Among the Nacirema." In THE NACIREMA: READINGS ON AMERICAN CULTURE, James P. Spradley and Michael A. Rynkiewich, editors. Boston: Little, Brown, and Co., 1975.

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NACIREMA INITIATION CEREMONIES

I shall present an extended ethnographic description of the major initiation ceremony of the Nacirema. The Nacirema live in the general area between the Cree of central Canada and the Tarahumara of northern Mexico. Some of their customs have been described by Ralph Linton, Horace Miner, and Thomas Gladwin. The following description is based upon several years of my personal observation.

During the late spring, large gatherings are held in all of the setats to celebrate the passage of the members of an age-grade into the status of adulthood. Initiation begins for members of both sexes at an early age and continues on and off for twelve or more years, until the elders are satisfied that a young man or woman has acquired the necessary amount of esoteric and exoteric knowledge to permit him to compete in the prestige system. Persons who do not complete at least this basic initiation are known as /drabawts/ and are condemned, at least in theory, to menial occupations and low-status marriages; many of them become warriors and attempt to acquire status and property in this way.

A striking fact about the preparation for initiation is that, although division of labor by sex is strongly marked for the adults, persons of both sexes receive (with a few exceptions) the same basic types of instructions--primarily dealing with tribal mythology, folk science, and the manipulation of esoteric symbols. Females sometimes receive training in sewing or cooking and males in woodcraft, but this takes little time compared to the many hours spent in repetitious rote learning of ideology, magical number combinations, and the representation of words by arbitrary conjunctions of signs. The Nacirema feel very strongly about the need for accuracy in using the archaic representations of words, particularly when these bear no phonetic resemblance to the sounds, a single error in a message is enough to discredit the sender. It is not surprising that some successful men who have never been able to master the system employ pretty young scribes to ensure the ritual accuracy of their messages.

In the final initiation ceremony young initiates are generally grouped together on some high place to which they have marched, while still younger persons blow and beat upon musical instruments. Kinsmen of the initiates watch with pride, sometimes calling encouraging remarks to their offspring. The initiates are doubtlessly uncomfortable, but smile bravely, for their ordeal is finally coming to an end. Often, just before the final ceremony, they have been accorded certain adult privileges such as the face-scraping rite (for males) described by Linton, the head-baking rite (for females) alluded to by Miner, and other minor prerogatives for both sexes. Males often have their hair cut shortly before the ceremony. Both sexes are dressed in their finest clothes, but these are covered by black robelike garments, which indicate the sacred nature of the ceremony. On their heads they wear a peculiar black headdress, designed solely with regard for its symbolic value rather than the need for keeping it on top of the head.

Standing with the initiates are the leaders of the initiation school, who were responsible for discipline during the last four years of training, and generally some chiefs of the territorial or local areas. When all have assembled, a leader of some local cult invokes the blessing of the gods upon the initiates and the main part of the ceremony begins. This consists, first, of a number of orations by the leaders, the visiting chiefs, and certain members of the group being initiated. The latter are the most amusing for someone familiar with the culture. The chosen initiates are expected to praise their instructors exorbitantly and to thank them for the great benefits conferred upon them and for allowing them to be initiated; this despite the fact that the restless Nacirema youth have complained unceasingly about the constraints and discipline of the instructors during their preparation. The longest oration is delivered by the highest-status chief present just before the climax of the ceremony. It is notable for its lack of relevance.

The climax of the ceremony is reached when each of the initiates is called forward to receive the blessing of the leaders and the mark of adulthood. Until this point, the initiates have been treated as a group, but at last their individuality is recognized. The classic pattern of a rite of passage is enacted. The initiate leaves his age-group (separation). He humbly approaches the leader, who touches his right hand while presenting him with a magical scroll upon which his name is inscribed in archaic script (transition). He then returns to the group of initiates, having adjusted his headdress to indicate his new status (incorporation). Another blessing is recited, this time by the leader of a rival local cult, and the initiates march off to the sound of drums and horns, soon thereafter to join their families and friends.

The values expressed in the orations and by the ceremony itself relate to the preparation of the initiation system and its relation to the form of the adult society. Some parents have been known to take up residence in particular villages so that their children will be initiated by respected leaders and instructors. Initiates who show particular promise are encouraged to go through further ceremonies, acquire esoteric knowledge available only at special cult centers, and become instructors themselves. Although the financial sacrifices in adopting such a life are considerable, many young people (presumably those who are most tradition-oriented) do this and perpetuate the very system against which they had rebelled. Thus does the weighty hand of tradition press down upon each succeeding generation, molding its members to the ideals and expectations of the society. Here, as elsewhere, Nacirema culture shows itself to be ingeniously adapted to the functional requirements of enculturation, though the degree to which these patterns are relevant to the needs of the young people must be seriously questioned.

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TALES BONES TELL

In cases of homicide, mass disaster, missing persons, and death from undetermined or suspicious causes, law enforcement personnel often turn to scientists. Scientists in diverse fields (physical anthropology, botany, entomology, biochemistry, and sociocultural specialties such as costume design and analysis) apply their expertise to examining the human skeleton and related artifacts to illuminate the identification of remains or the circumstances surrounding a death. Physical or forensic anthropologists have participated in some of the most publicized cases of the century, including the identification of victims of serial killers such as Ted Bundy, the Green River Killer, Henry Lee Lucas, and Jeffrey Dahmer; of soldiers killed in Korea, Vietnam or Operation Desert Storm; and the solution of mysteries surrounding such figures as the Texas gunfighter William P. Longley and the kidnapped Lindbergh baby.

The forensic anthropologist can usually determine age at death, race, sex, and stature; detect any indications of trauma, disease, and occupational or habitual activities; and estimate elapsed time since death. The best sources--often the only sources--of such information are the skeleton and teeth.

When a complete skeleton or even a single bone is found, the first question is whether it is human, nonhuman animal, or other (e.g., burned gourd resembling a human skull). As human and animal bones differ in texture, density, shape, and size, visual examination quickly provides an answer. Should human and animal bones be present, they are separated, and the number of individuals represented by the human bones determined. Next the bones are examined for evidence of stabbing, bullet wounds, or butchering (i.e., disarticulation).

Forensic anthropologists examine human skeletal material using a variety of techniques to obtain many kinds of data. Determination of sex, race, age, stature, date and cause of death, and occupational or habitual activities all help in the quest for positive personal identification.

Determination of Sex

The most reliable osteological (bony) indications of sex are the pelvis, skull, and mandible, and the size of the long bones and joints. The female pelvic girdle consists of two hip bones and a sacrum that have a number of bony features differing from those of a male. For example, when the two hip bones of an adult female are put together with the sacrum and viewed from above, the birth opening is circular and large; female hip bones have a more outward flare than those of males; and the female pelvis has a broader notch for the sciatic nerve and a wider angle where the two pubic bones, which are long and rectangular, come together. These structural traits facilitate the process of giving birth. In contrast, the male pelvis is usually larger and more muscle marked than the female. The cavity viewed from above is heart-shaped rather than circular and the pubic bones are short and triangular.

Like the pelvis, the male skull is typically larger and more muscle marked than that of the female. In addition, males exhibit larger mastoid processes (behind the ears), a sloping forehead with more developed browridges, blunt upper margins of the eye orbits, in contrast to the sharp orbital rims of females, and a larger lower jaw with a more squared chin.

Racial Affiliation

Racial affiliation is difficult to determine even in the living. Human populations, or even human families who are closely related genetically, are extremely variable. In addition, humans have always been quite mobile, and interbreeding among different populations is common throughout the world. Many of the characteristics used by the public to determine "race", such as a particular skin color or nose shape, actually occur throughout the world in unrelated populations. The concepts "Black," "White," "Asian," or "Native American," commonly used in the US, are social constructs, whose boundaries are arbitrary and bear little relationship to biological affinities. In examining skeletal material, the forensic anthropologist faces a further dilemma. Skeletal attributes more common in particular populations may not correspond at all to the surface characteristics such as skin color or hair form that are used to suggest ancestry among the living.

In the order of most to least reliable, the skeletal indicators of racial affiliation-- people of African descent, people of European descent, and East Asians, which include Native Americans, Eskimos, Chinese, Japanese, and other Asians--are most apparent in facial structure, skull, teeth, and thigh bone. Anthropologists assess these attributes on a scale ranging from mild to prominent. For example, many people of African descent have short, wide nasal openings and grooves at the base of the bony portion of the nose in contrast to many people of European descent, who have narrow, long nasal openings and a ridge at the base of the nose. When viewed from the front, the faces of "Europeans" tend to be narrow and long, and those of "Africans" tend to be wider and shorter; and those of "Asians" may range from flat to concave.

In regard to teeth, "Africans" often have complicated or "wrinkled" molar cusp patterns. Two dental traits common to many "Asians" are an edge-to-edge bite and shovel-shaped incisors. Nearly all Native Americans who lived before about AD 1900, and many extant Asian groups, have severely worn teeth.

Determination of Age

The age of a person less than 18 years old can be determined most accurately by the stage of dental development, as the teeth develop in a predictable sequence making possible an age estimate generally accurate to within six months.

The size and stage of development of the long bones in the legs and arms also provide information for estimating the age of a subadult to within about 16 months. The maximum length of a single bone can be obtained and compared to bone lengths based on clinical growth standards; the resulting age estimate is accurate to within a few months.

Whereas age estimates of children are based on the stage of development of the skeleton and teeth, those of adults are derived from advanced growth and degenerative changes. Thus indicators of adult age include the stages of sutural closure in the skull's cranial vault and palate and structural changes of the pelvis. Equally important indicators are degenerative changes, such as arthritis of the spine and joints, and a general decrease in bone mass, a condition known as osteoporosis.

Determination of Stature

Stature or height can be determined for a child or an adult if there is at least one complete or nearly complete long bone of the arm (humerus, radius, or ulna) or leg (femur, tibia, or fibula). The measurements can then be compared with tables giving ranges in relation to sex, age, and so on.

Elapsed Time Since Death

To estimate the postmortem interval from death to discovery in weeks, months, or years is perhaps the most difficult aspect of forensic anthropology. During the first 24 hours after death, the human body goes through rigor mortis. Within a few days the body begins to decompose, and the facial features become unrecognizable. Maggots are responsible for most of the process of reducing the body to a skeleton. When the body is not fully skeletonized, forensic anthropologists or entomologists can determine time since death by identifying the species of insects feeding on the body and determining its stage of development (maggots metamorphose from egg to the adult). If the remains are skeletonized, then the forensic anthropologist considers the color, cracking, and dryness of the bones and the absence of odor.

Trauma and Disease

Blunt and sharp force trauma in bone results from the impact of a brick, gunshot, or stabbing or slashing weapon. If the individual was fatally injured and died before the affected bone began to heal, the injury is designated perimortem, meaning that it occurred at or near the time of death. Examination of perimortem trauma can suggest the type of implement used and, often, the cause of death. Certain diseases such as cancer, syphilis, tuberculosis, and leprosy can also be identified in a skeleton because the disease alters the bone.

Evidence of Occupational or Habitual Activities

Bone responds to mechanical activity and exercise through growth. Conversely, insufficient activity and immobility lead to a decrease in bone mass. In persons who engage in repetitive activities for long periods of time, bones display adaptations to such activities. Overdevelopment can be seen, for example, in baseball pitchers (humerus), archers (scapula), blacksmiths (humerus), and dancers (feet). Other examples include dental grooves from holding nails between teeth (carpenters), chipped front teeth from opening bobby pins or safety pins, and stress fractures of toes in persons engaged in martial arts.

Positive Personal Identification

Frequently, the ultimate goal of a forensic investigation is to establish a positive identification. The police or medical authorities search files of missing persons for individuals who fit the physical description supplied by the anthropologist (for example, a white female, 25-30 years of age, who has been missing for one year). Facial photographs and dental and medical records, including radiographs (x-rays), of suspected victims are then requested from family, doctors, dentists, and hospitals. In the absence of fingerprints, a positive identification can be made from comparison of features revealed in x-ray pictures taken before and after death. Forensic anthropologists seek unique and individualizing features in the skeleton, such as a healed broken bone or evidence of a particular bone disease, and in the teeth, such as the number and shapes of dental fillings. Most identifications are achieved through comparing dental x-rays of a missing person with those of the victim. Unusual dental traits such as chipped front teeth visible on photographs also provide evidence leading to a positive identification. When all else fails, a facial reproduction, either in clay or a sketch by an artist, can be produced and the presumed likeness distributed to police agencies or news media in an effort to find someone who recognizes the victim.

Forensic anthropologists, with their specialized knowledge of comparative anatomy and skeletal variability, have become integral members of homicide and mass disaster teams that travel worldwide. Their expertise in the identification of decomposed and skeletonized human remains has led to the identification of many individuals for whom conventional means have not been successful.

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Robert Mann
U.S. Army Central Identification Lab
Hickam AFB, Hawaii

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SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

WHAT BONES TEACH US

Collecting and studying human skeletons in museums and scientific laboratories is presently a complex, controversial subject. The purpose of this article is to explore the kinds of information scientists obtain by studying human skeletons, and how that information is used.

A physical anthropologist is trained to determine many facts about an individual from bones alone. For instance, sex identification often can be determined by the differences in the pelvis and skull. Even bone fragments may be sexed; some chemical components of bone differ between men and women. Age at the time of death can be estimated very closely by looking at the teeth and at the fusion between different parts of the same bone, especially for children and young adults. For older people, the estimates are less exact and rely more on changes in joint surfaces, fusion between skull bones, and microscopic details of internal bone structure. Height is estimated by the length of the long bones, especially the thigh. Race can often be determined by looking at characteristics of the facial skeleton. Statistical studies of tooth, skull and face shape can even distinguish closely related groups within the same major race.

The skeleton reveals information about lifestyle as well. Well-developed muscles leave their mark on bone and tell of heavy physical activity during life. Habits (such as pipe-smoking) and handedness may leave traces on teeth or in asymmetric bone and muscle development. Health, injuries, and many diseases, such as syphilis, tuberculosis, arthritis, and leprosy, may leave traces on bone. A subfield of physical anthropology, paleopathology, is devoted to the study and diagnosis of diseases in ancient human remains.

From these studies, paleopathologists are often able to provide medical insights on the history and ecology of modern human diseases. For instance, childhood illness or malnutrition can be detected by abnormalities in tooth enamel and bone mineralization. By noting the position of these abnormalities, physical anthropologists, with their knowledge of normal growth patterns of bones and teeth, can often pinpoint at exactly what age the illness or growth disturbances occurred. From this can be determined whether a child's health problems were caused by a sick or poorly nourished mother, by early weaning, or by later periods of food shortage.

Victim Identification

Because of their skill at piecing together an individual's life history from skeletal clues, physical anthropologists are constantly in demand to help identify humans who have been the victims of accidents or foul play. The forensic anthropologist can tell authorities if bones are human, and if disarticulated, whether or not they all come from the same individual. Today, physical anthropologists are helping Argentinean authorities locate and identify skeletons of people kidnaped and murdered by political extremists during Argentina's period of upheaval in the past decade. Recently, anthropologists helped confirm the identification of a skeleton attributed to Nazi war criminal Josef Mengele. Other scientists use information learned from studying museum skeletons to help provide facial reconstructions of what missing children might look like several years after their disappearance.

Burial Remains

Why do scientists collect and study more than one skeleton from the same site or cemetery? Isn't one enough? The answer depends on what questions the scientist wants to answer. Although a single skeleton can tell us much about an individual, that person is known only in isolation, and people don't live in isolation. To the anthropologist, much more important information about whole social groups, their history and relationships with neighboring and past cultures, their diet and health, and also their social customs and relationships can be obtained only by studying large numbers of skeletons from the same culture or living site. Such population-wide studies require many specialized analytic techniques that depend on having large numbers of observations in order to be valid.

The Case of the Ainu

Many of these population studies have provided information about past human migrations, declines, and relationships that were unrecorded even in traditional stories and myths. For instance, research by anthropologists on the Ainu of Japan has resolved some long-standing questions about their origins. The Ainu are considered by most Japanese to be a low status ethnic minority whose physical features are somewhat different from the majority population. Although Japanese tradition holds that modern Japanese are descended from the prehistoric Jomon culture found throughout Japan, two studies now show that the Ainu are the true descendants of the Jomon people. According to studies of minute variations in teeth and skulls of the modern inhabitants of Japan, and of various prehistoric cultures from Japan and other parts of Asia, the modern Japanese are most likely the descendants of invaders from northern China called the Yayoi, who conquered the islands a little over 2,000 years ago. An interesting twist to the story is that many of the medieval Japanese warrior class, the samurai, show physical features that suggest that they were descendants of Jomon mercenary armies recruited by the Yayoi during their military conquest. As the samurai gained power and status, they eventually intermarried with the Yayoi ruling classes and passed on some of their typically "Ainu" facial traits into the modern upper classes of Japan. Today's Ainu are the descendants of unabsorbed Jomon populations who were pushed into increasingly marginal areas by the Yayoi-Japanese and their Jomon-derived samurai.

Similar kinds of studies have been used to provide answers to questions as diverse as how many waves of prehistoric immigrants populated Australia, how much white admixture there is in various American Indian groups, and how much intermarrying there was between Pueblo groups in the Southwest and Europeans during the contact period. Other researchers using the same techniques have been able to chart the progressive distinctiveness of American Indian groups from other Asians and Pacific island populations to estimate when American Indian migrants first entered the Western Hemisphere and when the various tribes became separate.

Mohenjodaro Revisited

Scientists utilizing new techniques have even been helpful in resolving questions about classical civilizations. The city of Mohenjodaro, the center of Harappan civilization in the Indus Valley, was thought to have been sacked by Aryan warriors invading in 1500 BC. After studying the human remains from Mohenjodaro, anthropologists have now concluded that no massacre ever occurred because they found no battle injuries on the bones. They also found no evidence of genetic differences between populations before, during, and after the decline of Mohenjodaro, which makes an invasion of foreigners very unlikely. However, the skeletons did show high levels of disease and parasites, which might have been a more important cause of the Harappan decline than any invasion or conquest.

Disease, Diet, and Demography

Studies of cemeteries show scientists how human groups interact with their environment, and how they in turn are affected by changes in the physical world they occupy. Reconstructions of demography, diet, and growth and disease patterns help physical anthropologists understand the ecology of prehistoric groups and make some surprising discoveries about human adaptations, such as the health costs of agriculture, and the origins of some modern human diseases.

Many diseases can be diagnosed from skeletons, and it is sometimes possible to recover fossilized bacteria, and occasionally, amino acids for blood typing directly from bone. One extensive study of Grecian cemeteries from ancient to modern times traced the increase in malaria-resistant anemia (thalassemia, similar to sickle-cell anemia in Africa) in Grecian populations, and showed the effects of changes in ecology and social and economic patterns on the health and lifespan of ancient and recent Greeks. By looking at groupings of skeletons in cemeteries, the scientist was also able to reconstruct families or clans, and to show that anemic groups were more fertile than others.

Studies of skeletons can also tell what people ate, even without having any cultural information. Some techniques measure certain chemical isotopes and trace elements in ground bone. These amounts will differ, depending on the proportion of meat to vegetables in the diet, and on the type of plant foods eaten. Results have shown that in some prehistoric groups men and women had different diets, with men sometimes consuming more meat and women eating more plant foods. Other studies have shown that different diets leave different microscopic scratch patterns on tooth surfaces, and several kinds of prehistoric diets can be distinguished in this way.

Changes in diet often cause changes in health, which can be seen in the skeleton. The shift to maize in the prehistoric Southwest coincided with an increase in porous bone in skeletons, a sign of iron deficiency anemia. In maize farmers from Dickson Mounds, Illinois, defects in tooth enamel, which are caused by stress during childhood, are more numerous. Infant mortality was also higher, and adult age at death lower than in pre-agricultural groups. Similar studies of Hopewell mounds concluded that the agricultural Hopewell had more chronic health problems, dietary deficiencies, and tuberculosis than pre-agricultural groups. Agriculture is usually thought to bring an improvement in quality of life, but the surprising conclusion that prehistoric agriculture marked a decline in general health in the New World has been confirmed by many other studies.

Recent Population Studies

Studies of human skeletons can be useful even for recent populations, when written records are limited or have been lost. Several studies have reconstructed the living conditions of African-Americans both during and after the end of slavery. Skeletons recovered from an 18th century New Orleans cemetery showed many differences in nutrition and physical stress between urban and rural slaves. Skeletons from a late 19th-early 20th century cemetery in Arkansas open a window on this period, which is not well documented by other historical sources. Researchers concluded that men commonly left the community (there were few male burials), and that some of the community intermarried with the local Indian population. On the whole, the population was poorly nourished and had low resistance to disease. Many infants died at birth of widespread bacterial infections. Childrens' skeletons show dietary deficiencies and chronic infections, with many dying at 18 months, the weaning age. Iron deficiency anemias were common, probably due to corn-based diets; high levels of arthritis indicate heavy physical labor; and many signs of injuries on male skeletons may be evidence of high levels of interpersonal violence. Even without written records, the skeletons in this Post-Reconstruction community tell us of continual malnutrition, poor health, and levels of physical stress, which even exceeded those found in some communities during slavery.

Ancient Diseases in Contemporary Populations

Physical anthropologists find many contemporary diseases in earlier human populations. Some show peculiar distributions in the United States today, which can sometimes be tied to disease prevalence in the past. One of these is osteoporosis, a weakening of bone due to a calcium-poor diet and low bone mass resulting from low exercise levels during life. This condition afflicts primarily elderly white females, leading to spontaneous fractures and spinal deformities. Surprisingly, anthropologists have discovered that osteoporosis is common in living and prehistoric Eskimos of both sexes, and appears at an earlier age when compared to American whites. However, fractures and spinal problems have not been common in Eskimo populations. In spite of the traditional calcium-poor Eskimo diet, vigorous exercise results in heavier bones that protect the individual in old age. Now however, increased lifespan and alterations in lifestyle may contribute to a rise in osteoporotic bone disorders in Arctic populations in the future.

Evidence of a disease in prehistory is sometimes useful in understanding its cause. Osteoarthritis is often found in prehistoric skeletons. Changes in the locations and numbers of joints affected, and in the proportions of men and women afflicted, have suggested that systemic factors affecting only one sex may be involved in the severity of modern arthritis, an insight that may help focus further research efforts. Studies of prehistoric skeletons have shown that high levels of tooth decay are typical only of agricultural populations. This has led to the observation that sticky carbohydrates common to most agricultural diets have something to do with the epidemic of tooth decay modern populations are experiencing. But mineral deficiencies may also be involved, as some high levels of cavities and periodontal disease have been found in non-agricultural prehistoric Illinois Indians. Since the mineral content of ground water would affect the disease resistance of tooth enamel, such studies pointed to mineral supplementation of drinking water as a means of combating tooth decay. Tuberculosis has been found in skeletons as early as 5000 yrs B.P. in the Old World and by at least A.D. 1000 in the New World. It is associated with keeping livestock and living in sedentary or urban centers. Cemetery studies in Europe have shown a curious relationship between tuberculosis and leprosy, also a very ancient disease. Skeletons rarely show signs of both diseases, and as tuberculosis became more common in Europe in the late Middle Ages, signs of leprosy in European skeletons declined. Medical researchers now speculate that exposure to tuberculosis provides individuals with some immunity to leprosy.

Some health problems are more common in Native Americans than in the general population. One of these is rheumatoid arthritis, which had been thought to be a recent disease possibly caused by an infection. The discovery of rheumatoid-like lesions in prehistoric American Indians has changed the focus of medical research on this disease. Another condition more common than expected in some Native American tribes is the cleft palate/cleft lip complex of congenital bone defects. Clefting of the face has been found in prehistoric skeletons from the same region, though it is not as common as in the modern population. It is not known whether this shows a real increase in the problem, or if burials of prehistoric babies who died from their condition are simply not recovered as often as adults. Some researchers speculate that the increase, if real, might be the result of more inbreeding in tribal populations than would have occurred in the past, after groups were confined on reservations, and traditional migration and marriage patterns were disrupted.

Patterns of Social Organization

It might seem surprising that we can learn much about the patterns of political and social organization of past cultures from a study of bones, but in fact physical anthropologists and archaeologists can discover a great deal about social customs in prehistory through studies of cemeteries. This is only possible, however, with data about age and sex of each burial.

Evidence of status and marriage patterns are often visible in cemetery populations. Anthropologists studying skeletons from the prehistoric North American site of Moundville, Alabama, reconstructed three different status groups in Moundville society. These included individuals whose remains were either used as trophies, or were possibly sacrifices sanctifying the mound-building process, an intermediate group containing both men and women, and a high-status group composed entirely of adult men. By analyzing genetic differences among men and women in the same cemetery, it is often possible to reconstruct marriage and residence patterns. For instance in one study of prehistoric and historic Pueblo cemeteries, women in each cemetery had very similar genetic markers, while the men in each group were quite variable for those same traits. This indicates that women lived and were buried with their kin groups, while men lived and were buried with unrelated groups. The ancient Pueblo people were matrilocal, just as the modern tribes are today. Some studies have revealed a relationship between an individual's status during life, and his or her physical characteristics, such as height. Taller people tend to have higher status markers in their graves in several prehistoric cultures. This is more often true for men, but in some groups taller women also had higher status. By studying skeletons for indications of growth disturbances and disease, scientists can sometimes tell whether the greater height of high status people was due to better diet and more resources, or whether they were just genetically predisposed to be taller.

Conclusion

The above examples show how anthropologists can learn about many facets of the lives of individuals and communities of past cultures by studying the skeletal materials. The study of modern, historic, and prehistoric skeletons has made it possible for anthropologists to contribute an enormous and diverse array of information about human behavior and morphology past and present. None of these studies could have been accomplished without thorough study of human skeletons. To obtain this information, scientists commonly use techniques that were unheard of and unanticipated even a generation ago. It is certain that many more new approaches to reconstructing past lives from bones will be discovered in the future. Many collections may be studied and restudied, in the quest for new answers to old questions, or for answers to new questions altogether.

Prehistoric populations left us little of their history and experience from which to learn. By careful study of their skeletons, we gain an understanding of ancient humans that would not otherwise be possible. The late J. Lawrence Angel, a noted Smithsonian physical anthropologist and forensic expert, always kept a sign in his laboratory: "Hic locus est ubi mortui viventes docent." In this place, the dead teach the living. They teach us about the past, and if we listen carefully, about the future as well.

Recommended Reading:

Brothwell, D. R. Digging Up Bones. 3rd ed. Ithaca, NY: Cornell University Press, 1981.

Ubelaker, D. H. Human Skeletal Remains. 2nd ed. Washington, DC.: Taraxacum, 1989.

Wells, Calvin Bones, Bodies, and Disease. New York: Praeger, 1964.

Kathleen Gordon
Department of Anthropology
Smithsonian Institution,

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"BLESSED BE THE TIES THAT BIND": A FAMILY FOLKLORE ACTIVITY

Over the last decade historians, sociologists, anthropologists, and folklorists have begun to focus attention on community studies, teaching us much about the varied traditions flourishing in America. Within our country we must look to the experiences of ethnic and religious minorities, the lives of women and children, the history of regional and occupational groups, and even to our own family folklore to find the creative and cultural expression of the American past. "For every famous literary and photographic work, there are hundreds of thousands of stories and snapshots in which Americans have invested a large portion of their creative genius. Family tradition is one of the great repositories of American culture. It contains clues to our national character and insights into our family structure" (Zeitlin, Kotkin, and Baker, p.2).

Family folklore, then, consists of family stories, expressions, customs, traditions, and photographs that characterize a family's life. Having students collect, record, and write about their family folklore can be an exciting and meaningful way for them to connect themselves to broader American culture and history, as well as help them sharpen their skills in social studies and language arts.

HOW TO BEGIN

Since family folklore consists of traditions, stories, artifacts, and photographs, each of these categories can be the focus of class projects.

1. Holiday Analysis: Explain to students that a family tradition is a special practice that a family reenacts in approximately the same way day after day or year after year. A birthday celebration, Passover Seder, or Thanksgiving dinner may give rise to family traditions as may other holidays such as the Fourth of July or Labor Day. On a chart have students make a list of all the holidays they or their families celebrate, and briefly describe what traditions are associated with each. For example, students can list what foods are eaten, when and where the holiday meal is served, and who usually attends. What games, if any, are played? Are certain objects or dishes always present? Are gifts exchanged, and if so how, when, and where? Are songs sung, music played, dances danced, prayers offered, or speeches given? Is the national flag displayed? Is religious service attended? After compiling their individual charts, students should be ready to discuss the origin of holidays, and the various ways each is celebrated. It should become readily apparent that holidays originate for a variety of reasons, but that while students share some traditions with one another, other traditions are unique to each person's family. Some of this interesting variation arises from regional, ethnic, and religious background, but some of this variation also arises from family history. As students share their common and different experiences, a rich blending of family and cultural history should emerge, along with new understanding that both the yearly cycle, and our personal lives are marked by continuing celebrations and rituals.

2. Interviewing Family Members: The next project might be the recording of a student's own family history through information gained by interviewing another family member. Every interview will be different, and students should be encouraged to formulate their own questions. The attached Interview Guide and Questionnaire should be useful in helping students conduct successful interviews.

3. Family Stories: Once students have conducted interviews they will be in a good position to share and analyze their family folklore. Researchers have detailed certain recurrent themes in family folklore stories such as the "crossing over" or the migration west in covered wagons; stories of family heroes, rogues, or misfits; stories of parents' youthful antics or courtship and marriage; or stories of family misfortunes, feuds, or escape from near death. Ask students to share their stories and see if they can identify any of these or other common themes.

4. Planning a Family Folklore Unit: After students have done a holiday analysis, interviewed older family members, and collected family folklore stories, a number of class projects and units are possible. Students can make a collection of photographs, objects, and recipes handed down in their families. The class may want to make an illustrated collection of particularly amusing or dramatic family stories. Photo albums can be shared, and photojournals or scrapbooks can be created combining stories, reminiscences, family expressions, family photos, genealogy charts, and personal and family time lines marking and illustrating important family events and changes.

Through these and other projects described in the attached list, students should gain an appreciation of tradition and continuity from one generation to the next, and the value of preserving traditions, objects, and ideas from the past. Through family folklore a teacher can bring history to life and life to history as well as help students connect their personal and family past to broader cultural and language arts study.

FAMILY FOLKLORE INTERVIEWING GUIDE

(adapted from "A Family Folklore Interviewing Guide and Questionnaire"
by Holly Cutting Baker, Amy Kotkin, and Margaret Yocom, 1978)

A Word of Warning: Because family folklore exists only within the context of a living family, it is constantly evolving. Each generation will forget or alter the lore that it has received; on the other hand, that same generation will add new verbal lore and new traditions. A tradition does not have to be old to be worth recording. Collecting family folklore is one case in which too much is better than too little. Tapes can be edited and transcripts can be discarded, but the tradition, story, or expression that you neglect to record today may exist only in memory next week. Also, no one can record all a family's folklore.

Equipment: Note-taking and tape recording are the usual means of recording family folklore. Both methods have their advantages and disadvantages. When a choice is possible, you should use whichever will work best for the situation of your interview. Note-taking can be distracting and make it difficult to participate in the conversation or activities involved with the interview. Also the expressions of the voice of the informant are lost.

A tape recorder may at first make the participants uneasy but they will soon become accustomed to its presence. A small cassette machine with a built-in, omni-directional microphone will give the best results. A ninety-minute cassette is a good choice since it will record substantial segments of an interview without interruption. The microphone should be placed so that all voices, including yours, can be picked up. Run a test before you begin the actual interview and adjust the machine accordingly. As far as possible all extraneous noise should be eliminated.

Although not as essential as a tape recorder, a camera is a useful piece of equipment. Besides providing a visual record of the participants, it can also be used to copy any documentary records that your informant might offer such as photographs or scrapbooks.

People to Interview: Start with yourself. You will know a great deal about your family history. Questions you come up with will give you guidelines of what to interview other people about.

The first outside person you interview should be someone with whom you feel very comfortable. A parent or sibling is a good choice. Don't neglect non-relatives. Your grandfather's best friend might tell you things about him no family member knows. Each interview will give you clues whom you might interview next.

Place: A spontaneous, natural context is the best to bring about the flow of memories--family dinners, talking with grandma while doing the dishes or cleaning out closets. If possible, plan to hold your interview while doing a natural kind of activity like walking, baking, or visiting--anything that naturally brings about memories. You might use an heirloom or photographs to help move the interview along.

Ethics: Because of the personal nature of folklore, students must be careful to protect the privacy and rights of all family members. Before initiating a unit in family folklore, it is a good idea to explain to your students' parents the class project. Assure parents that students will interview only willing family members. Explain the purpose of the unit; for example, that the class is studying family folklore as part of their study of American culture and that students will learn about writing, analyzing, and reporting information they gather through research and interviews. Before any interview, students should explain to the person being interviewed the purpose of the research.

Planning an Interview:

Spontaneous interviews will have to be handled as they happen. However, if possible, students should preplan their interviews. It is even possible to supply informants with questions ahead of time. Questions should be developed so that one follows another logically. A few well-prepared questions will work better than many poorly prepared ones. Following are guidelines to ensure a successful interview.

1. Well-prepared questions are:
    a. concise and to the point, not ambiguous.
    b. not too personal.
    c. not too wordy.

  - d. free of emotionally charged words. Be as objective as possible; avoid asking a question to get a specific response.

2. Helpful hints in formulating questions:
   - a. to get facts, ask What? When? Who?
   - b. to get ideas or relationships in general, ask How? Why?
   - c. to get analysis or critical thinking, use the words
     explain, can I have a reason, account for, what is the importance of, tell me why you agree or disagree, give illustrations for, how do you explain?
   - d. to get an evaluation or provoke further thought try asking
     explain, show me, clarify, how would you evaluate?
   - e. to get description, use the terms tell, discuss, describe, illustrate, paint a word picture of

3. Realize there will be some information you will not be able to get. There may be sensitive material people do not want to discuss.

4. Be as low key as possible. Realize that you may be seen more as an interrogator than a son, daughter, or friend during the interview.

5. Show interest. Take an active part in the conversation without dominating it. Be a good listener.

6. Know what questions you want to ask, but don't be afraid to let your informant go off on a tangent. He or she may touch on important subjects you did not think to ask about.

7. Never turn off the tape recorder unless you are asked to. Not only does it break the conversation, such action suggests that you think some of your informant's material is not worth recording.

8. Use props whenever possible. Documents, letters, photo albums, scrapbooks, home movies, and other family heirlooms can all be profitably used to stimulate memories.

9. Be sensitive to the needs of family members. Schedule your sessions at convenient times. Older people tire easily; cut the interview off at the first sign of fatigue. Don't slight family members who show interest in your project. Interview them even if you have reason to believe their material will be of minimal value.

10. If possible, prepare some kind of written report for the family members you interviewed as a tangible result of their participation. Remember to save all your tapes, notes, and other documentation you accumulated. Label everything with names, dates, and places. You will be more conscientious about documentation if you place yourself in the position of your great grandchild who, decades in the future, may use your project as a source for his/her own reconstruction of family history.

A POSSIBLE QUESTIONNAIRE:

Every interview will be different, and students should be encouraged to formulate their own questions. Every family is unique, and every interviewer has his own interests and style. Thus no single set of questions will elicit all possible family folklore from all families. The most useful questions will be those developed through a person's own knowledge of his/her own family. However, the list below may be helpful and suggestive to students first embarking on family folklore interviewing. The wording can be changed as well as the order, and students should be strongly advised to use them only as a resource in their own formulation of a set of questions to use in their interviewing.

Suggested Questions:

1. What do you know about your family's last name? Its origin? Its meaning? Did it change when your relatives first came to America? If it changed, what was it before and why was it changed? Are there any traditional first names, middle names, or nicknames in your family? How did they get started? When your parents married, did your mother keep her own last name? What does her last name mean? What is its history? How did your parents choose your name? What will you name your children?

2. How did your parents, grandparents, or other relatives come to meet and marry? Are there any family stories of lost loves, jilted brides, unusual courtships, arranged marriages, elopements, runaway lovers?

3. What stories have come down to you about your grandparents or parents? For example, what do you know of their childhood, schooling, marriages, occupations, political activity, religious affiliation, hobbies? How many different occupations can you name from your family? Are there any special talents or hobbies which have come down in the family such as playing a musical instrument, needlework, painting.

4. Ask some of your older relatives what they studied when they went to school? What did they dream of becoming when they grew up? What happened in their lives which made those dreams possible or impossible to fulfill? Where have they traveled? What unusual people have they met in their lives? What are the most important things they've learned in their lives?

5. What important holidays are celebrated in the family and how? What are the different ways family members have celebrated national, religious, or family holidays? What are the traditional meals, decorations, and ritual customs associated with these occasions? What innovations have your family made in holiday celebrations? Has your family ever created an entirely new holiday?

6. Are there any family stories about mysterious, eccentric, notorious, or infamous characters in the family? Any family heroes from the past? What stories have been handed down about these special people? Do you think the infamy or fame of the ancestor has grown through time?

7. Have any historical events affected your family? For example, how did the family survive the depression? How have past wars affected the family?

8. What other people (friends, household workers, children) have been adopted into your family? Are they called cousins, aunts, etc.

9. Does your family have any heirlooms, paintings of famous ancestors, objects of sentimental or monetary value which have been handed down? Are there stories connected to them? Do you know their origin or line of passage through the generations? Are there special tools that have been handed down? Does anyone use them today?

10. Does your family have photo albums, scrapbooks, slides, home movies? Do you know all the family members in these pictures? What can you find out about relatives who died before you were born? Whose responsibility in the family is the upkeep of the dairies, albums, etc. When are they shared or displayed? Are they specially arranged, edited, designed, and if so by whom?

11. Does the family have any unique expressions, folk sayings, or home remedies which have been passed down through the generations?

12. Does the family have any special recipes which have been preserved in the family from past generations? Are there any stories connected to them?

13. Does the family hold reunions? When, where, and how often? Who organizes the reunion, and who comes? What occurs during the reunion and is a record kept?

14. Is there a family cemetery or burial plot? Who is buried with whom? Who makes burial place decisions? What kind of information is recorded on the gravestones or gravemarkers?

FAMILY FOLKLORE PROJECTS AND WRITING ASSIGNMENTS

Projects:

1. Classroom Exhibits:

Students can build classroom exhibits using posters, photographs, artifacts, and stories drawn from their own family folklore to illustrate topics such as "Western Expansion"; "Immigration"; "Victorian Era"; "Jazz Age"; or "The Depression."

2. Scrapbooks or Photojournals:

Scrapbooks or photojournals can be organized in a variety of ways using family trees, genealogical charts, photographs, family stories, jokes, expressions, games, nicknames, songs, etc. Much of what students learn through interviewing older family members can be included. Some students may choose to focus this project more on their own personal history if they cannot gather enough material on their larger families.

3. Heirlooms:

Have students find out what objects they have which are family keepsakes or heirlooms. Have them find out the history of these objects and the stories behind these family treasures. Students can then write descriptions or imaginary stories about these important and symbolic objects. How do the heirlooms connect past, present, and future? What do they reflect of the family and the larger culture? Students can make a "Class Collection" of objects which could become heirlooms for a future generation.

4. Crafts:

In many families hand skills are carried down through the generations. Students can try to learn a handicraft from an older member of their family or research an earlier method of production from a specific period they choose. Once the research is completed, students should try to replicate the method as closely as possible for such crafts as: candle dipping, soap making, hide tanning, quilting, basket weaving, ham curing, vegetable canning, jelly or bread making.

5. Calendars:

Students can make a family food calendar by interviewing parents or grandparents about their family food traditions and recipes, particularly favorite foods, traditional holiday foods, and birthday foods. Each student can then make a food calendar with a family recipe and drawing illustrating each month. On the calendar all the holidays of the year can be marked as well as any family birthdays and anniversaries.

6. Home Remedies:

Ask students to research how their parents and grandparents cared for a) hiccups; b) a cold or the flu; c) warts; and d) indigestion. Then students can share their "cures" in a class discussion focussing on "family folk medicine."

7. Names:

Students can collect information about their first, middle, and last names, as well as any family nicknames. In class discussion it should become clear that names originate in a variety of ways and that names often reflect complex family tradition, origins, and even naming fashion trends. Students can research naming ceremonies and customs from a variety of religious traditions and cultures. Finally each student can create a personal Coat of Arms, Shield, or Name Crest illustrated with pictures symbolizing activities, values, or traditions important to their families.

8. Class Banquet:

Students bring in a variety of favorite family recipes, and together the class plans and prepares a "feast" made up of family foods and other traditional meal customs. Students who cannot contribute food can often contribute these customs, a prayer before the meal, or a game or song to come just after the banquet.

9. Guest Speakers:

Invite interested parents or grandparents to the classroom to share their particular food or holiday customs, family stories, photo albums, or handicrafts. Invite a religious leader to discuss ceremonies and rituals which mark important "rites of passage" such as birth, marriage, and death.

10. Time Lines:

Ask students to make an illustrated time line of important moments in their own lives: birth, birthdays, first school, pets, hobbies, travels, news skills, etc. Then ask them to make an illustrated time line of their family's history beginning with the birth date of the oldest member of the family. The line should include important births, marriages, and deaths, but also significant events such as migrations or moves, occupational changes, educational achievements, travels, etc. Family photographs of drawings can be used for illustrations.

11. The Ivinson Museum (or local Historical Society):

Visit your local museum or historical society and have students identify connections they can see between their own family history and the history of their community as reflected in the exhibits.

12. Imaginary Family Folklore:

Divide the class into groups, each one responsible for creating an imaginary family folklore. Each group must 1) create an "ancestor" and a story of migration to America; 2) have a family story of a hero or rogue; 3) describe an heirloom; 4) create an unusual holiday tradition. Groups then share their "folklore."

WRITING ASSIGNMENTS:

1. Many descriptive and narrative writing assignments easily grow from a study of family folklore. For example, students can describe:
    a) a childhood memory, a holiday meal, a family heirloom;
    b) a scene or person in an old family photograph;
    c) the family history imagined for a person in a photograph book such as the Family of Man;
    d) an amusing family story elaborated and illustrated;
    e) a short autobiography or family history illustrated with drawings or family photographs.

2. History and research paper assignments might include:
    a) relating family history to broader political, social, or economic events by asking students to incorporate interview material into papers on such topics as the depression, women's roles in the 1950's, World War II, and the beginning of the space age;
    b) a research paper based on events during the week the student was born;
    c) a study of the 20th century, decade by decade, using old magazines and newspapers, along with family histories.

3. For any novel or short story your class is reading, students can imagine, create, and write the family folklore of a particular character.

4. Writing Proverbs:

a) Students can write and illustrate a story explaining the proverb: "If you want to know the apple, you've got to study the tree."

b) Students can read books of proverbs to choose two or three which relate to family folklore and then use them as a basis for a story and illustration.

c) Finally, students can try to write their own family folklore proverb.

BASIC FAMILY FOLKLORE RESOURCES: (*Many of the activities in this Family Folklore Guide are based on suggestions found in these two sources.)

* Brooke, Pamela. SONGS JUMPING IN MY MOUTH, HUMANITIES ACTIVITY GUIDE FOR CLASSROOM OR AFTER-SCHOOL PROGRAMS. WETA, Box 2626, Washington, D.C. 20013, 1983.
An excellent activity guide which includes many family folklore projects and extensive bibliographies on related topics including the history and celebration of holidays around the world.

Cook, Ann, Marilyn Gittell, and Herb Mark. WHAT WAS IT LIKE WHEN YOUR GRANDPARENTS WERE YOUR AGE? New York: Pantheon Books, 1976.
Text and numerous photographs depict life in the United States in the 1920's and 1930's.

Dixon, Janet T. and Dora Flack. PRESERVING YOUR PAST; A PAINLESS GUIDE TO WRITING YOUR AUTOBIOGRAPHY AND FAMILY HISTORY. Garden City, NJ: Doubleday and Company, 1977.
A how-to-do-it family history book with suggestions for the creative writing aspects of doing family history.

Weitzman, David. MY BACKYARD HISTORY BOOK. Boston: Little, Brown, and Company, 1975.
Activities and projects such as making time capsules and tracing genealogy, written particularly for young students.

* Zeitlin, Steven J., Amy Kotkin, and Holly Cutting Baker. A CELEBRATION OF AMERICAN FAMILY FOLKLORE. New York: Pantheon Books, 1982.

A basic resource, including many family stories organized thematically, as well as a useful chapter "How to Collect Your Own Family Folklore." The out-of-print 1978 "Family Folklore Interviewing Guide and Questionnaire" by Baker, Kotkin, and Yocum has been incorporated into this book, which is based on research originally done at the Smithsonian Institution.

Information from the

National Museum of Natural History

SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

EXPLORING HISTORIC CEMETERIES
(A Teaching Activity)

In the Washington metropolitan area during the 16th, 17th, and early 18th centuries most "graveyards" were located in churchyards (e.g. Pohick Cemetery in Fairfax) and usually near the center of town (e.g. Christ Church Cemetery in Alexandria). However, overcrowding of graves and new sanitation laws mandated the closing of most of these early "graveyards" by the 1850's. The new cemeteries were located on the periphery of towns--distinct and separate from the focus of activity among the living. By the mid-19th century, a new genre of formal cemeteries was being established in America. (The Mount Auburn Cemetery is one of the earliest examples of these new burial places.) Most existing cemeteries in the Washington metropolitan area were created during this time and are generally referred to as "rural cemeteries." What was this new genre?

The newly established 19th century "cemeteries" (replacing earlier terms such as "graveyards") were not simply a place to inter the dead but represented a new type of cultural institution. Cemeteries were now formally designed to resemble gardens. The dead were not simply interred but memorialized. New rules defined such things as the proper care of the grounds and the appropriate attire and demeanor while visiting the cemetery.

The boundaries of most 19th century rural cemeteries are marked, for instance, by fences or shrubbery. Often a centrally located entrance leads to symmetrical paths or roadways that divide the cemetery into sections. These sections may be further divided into family plots or other areas (e.g. military graves). Planting may mark sections, plots or individual graves. Such features set off the individual graves as well as the entire cemetery, both physically and visually, from the surrounding area.

Nineteenth century cemeteries distinctly differ from earlier American graveyards. The differences are not limited to changes in gravestone styles, epitaphs, and symbols. Earlier graveyards express mortuary ideology and attitudes of death through individual graves. Nineteenth century institutionalization of rural cemeteries suggests that variation in individual graves is subsumed under the proscribed or implied elements of the institution. Rural cemeteries cannot simply be analyzed or understood as clusters of graves. Individual graves are an integral part of the overall cemetery "design." Interpretation of these 19th century cemeteries must, therefore, not only account for the variety among individual graves but also for the overriding common elements expressed in all such cemeteries.

CLASS EXERCISE

The exercise below focuses on historic cemeteries. These cemeteries provide archeologists with an interesting opportunity to examine how artifacts (in this case gravestones) vary at different times and in different places. Such variations often reflect how a culture is changing, how cultures differ from one another, and how artifacts reflect these changes and differences. To understand differences in gravestones, archeologists observe both the individual markers and the larger context or setting of these graves. In general, they ask how important are artifact patterns and the context of these patterns to archeological interpretations.

Select a cemetery to study and answer the questions for each part of the exercise.

1. What is the name of this cemetery? Spend about 15 minutes just walking around the cemetery. Pay particular attention to fences, paths, paved drives, chapels and other buildings, plantings, and other features of the landscape. Identify the boundaries of the cemetery. Is it marked by a fence, sidewalk, shrubs, or in some other way?

2. Make a rough sketch map showing the location of the fences, paths, and other features you have identified. Note the earliest and most recent gravestones and sketch in their locations. Does the cemetery seem planned or are the graves located haphazardly?

3. Using a standard form (see below), record 20 gravestones. Try to find different styles of gravestones to record. Do you find certain gravestone styles in only some areas of the cemetery and not others? Are these styles associated with only certain time periods? What does this tell you about the size of the cemetery at different times and how gravestone styles changed over time?

In metropolitan Washington, the most common gravestone styles are tablets, obelisks, blocks, and slabs. Occurring in the late 18th century to the mid-19th century, tablets are single vertical stones that average two to four inches in thickness and are made of limestone, marble, or sandstone. These stones, often with a sculpted top, are placed directly in the ground with no bases used. All the surfaces of these stones have been cut (or finished) but not polished.

Shaped like the Washington Monument, obelisks, usually made of marble, are tall and square in cross-section and dominate gravestones in the late 19th to early 20th century. The obelisk may be topped with an urn, ball (known as an orb), or other figure and may have one or several bases of varying sizes. While most gravestones are lettered only on the front, obelisks may show lettering on all sides.

Blocks, which are square gravestones, vary in size, may or may not have bases, and generally show cut but not polished surfaces. Made of a variety of different stones, these markers are characteristic of the 20th century. A variation of a block stone, the pulpit style marker has a slanted face on which is carved the individual's name, other information, and decoration. Made of marble or granite, pulpit stones rest on bases.

Slabs typify the 20th century and are still the most common gravestone used today. Slabs, often composed of granite, are usually placed vertically on a base and vary in thickness from six to eight inches. While the front of a slab is polished, the sides and sometimes the back are roughhewn.

Other gravestone styles may be noted as well--elaborate figurative sculptures, crude stones, or simple wooden crosses. Often greater numbers of unusual gravestones are found during transition periods from one general style (e.g. tablets) to another style (e.g. obelisks).

Initial studies of local 19th century cemeteries have yielded some unexpected results. The striking similarity among contemporaneous cemeteries representing distinct socioeconomic and religious groups proved the most surprising observation. Formally marked boundaries, landscaping, symmetrical paths, and in particular, the style of gravemarkers and the stone from which they are carved create a uniform visual impression. Economic class or religious affiliation are not immediately apparent. This suggests that the accepted "rules" for rural cemeteries--that is, how the grave is to appear in the landscape and the elements which it must contain--superceded differences within society. Only when individual grave data is examined do differences in community and religious cemeteries become evident. Contrasts in epitaphs, religious symbols, decorations, and the spatial arrangement of graves seem to be the ways in which class structure and religious affiliations are expressed in these 19th century cemeteries.

4. Locate at least five gravestones, from different time periods, which have epitaphs. What do these epitaphs say? What might they reflect about attitudes toward death? How does the use of epitaphs and what epitaphs say change over time? What might this mean?

5. Locate a family plot or several gravestones with the same surname. Do you think these individuals are related or are husband and wife? How can you tell? Are other relatives buried in the same area? Are these family burial areas more common in earlier graves or more recent graves? What might this tell you about the changing use of family plots over time?

6. Select five gravestones with men's names and five gravestones with women's names from different time periods. How are men's and women's gravestones similar? How are they different? What might this tell you about the changing roles and statuses of men and women over time?

Questions 1 and 2 are designed to have you take a close look at the cemetery and to notice the importance of elements other than just the gravestones themselves. Question 3 treats each gravestone as an artifact and focuses on the same kind of details an archeologist would find useful in understanding how artifacts reflect change over time. Questions about particular aspects of the cemetery, similar to 4, 5, and 6 can be added or substituted. For example, you can examine the special features of military gravestones or children's gravestones or holiday decorations of graves. Comparisons of different parts of the same cemetery or of different cemeteries are also interesting.

Anyone interested in recording gravestones may request copies of standard gravestone and cemetery forms from the Public Information Office, Department of Anthropology, Smithsonian Institution, Washington, D.C. 20560.

Readings:

Aries, Philippe. The Hour Of Our Death. New York: Alfred Knopf, 1981.

Deetz, James. "Remember Me As you Pass By." In Small Things Forgotten. New York: Doubleday, 1977.

Dethlefsen, Edwin. "The Cemetery and Culture Change: Archaeological Focus and Ethnographic Perspective." In Modern Material Culture edited by R. Gould and M. Schiffer. New York: Academic Press, 1981.

Dethlefsen, Edwin and James Deetz. "Death's Heads, Cherubs and Willow Trees: Experimental Archaeology in Colonial Cemeteries." American Antiquity 31 (1966):502-510.

Dethlefsen, Edwin and Kenneth Jensen. "Social Commentary in the Cemetery." Natural History (November 1977):32-39.

Mrozinski, Mary Anne. "Resources for the Classroom Teacher: An Annotated Bibliography (for Studying Cemeteries)." Markers 1 (1980):171-173.

Stannard, David. The Puritan Way of Death: A Study in Religion, Culture and Social Change. Oxford: Oxford University Press, 1977.

Stannard, David, editor. Death in America. Pittsburgh: University of Pennsylvania Press, 1975.

Weitzman, David. "Resting Places," In Underfoot: An Everyday Guide to Exploring the American Past. New York: Scribner's Sons, 1976.

Also of interest is the journal Markers published by the Association for Gravestone Studies.

Written by:
Dr. Ann Palkovich
George Mason University

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ANTHROPOLOGY OUTREACH OFFICE
DEPARTMENT OF ANTHROPOLOGY
SMITHSONIAN INSTITUTION

INDIVIDUAL GRAVE DATA

Name: ______________________

Date __________ Obs. ________

Cemetery: ______________________

Photo: B / W _____ Color ________

Sex ______ Age ______

Map / Location ________________

Born______ Died ______

Foot Stone Description ______________________

Plot Marker (Single / Multiple) Description ______________________

Grave Marker Permanent / Temporary

Shape

___ Tablet
___ Tablet-Like
___ Vertical Slab
___ Obelisk
___ Block
___ Triangular Block
___ Horizontal Slab
___ Pulpit
___ Figural
___ Sarcophagus
___ Cenotaph
___ Other

Material

___ Wood
___ Cement
___ Metal
___ Stone
  ___ Granite
  ___ Marble
  ___ Slate
  ___ Limestone
  ___ Other
  ___ Unidentified
  ___ Field Stone

Construction

___ Unfinished
___ Hand-Made
___ Formally Constructed
  ___ Carved
  ___ Molded
  ___ Soldered
  ___ Cast
  ___ Cut
  ___ Polished

Grave Adornment

Permanent

___ Potted Plant
___ Plantings
___ Religious Marker
___ Military Marker
___ Other

Temporary

___ Flowers
___ Wreath
___ Other

Individual

___ Fresh Flowers
___ Plastic Flowers
___ Wreath
___ Child's Toy
___ Other

Ritual Seasonal

___ Easter
___ Christmas
___ July 4th
___ Memorial Day
___ Other

Marker Dimensions: Ht. ________ Width: ________ Thickness: ________

Inscription: (Front / Back)

Design / Decoration

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ANTHROPOLOGY TEACHING ACTIVITIES: ZOO LABS

(All of the following activities were designed
for observation of monkeys and apes at the
National Zoological Park, Washington, D.C.)

ZOO LAB: LOCOMOTION

1. Walk by at least 8 cages with different primates and record what the most active animal in the cage is doing as you walk by--for. example, sitting, grooming, sleeping, brachiating (moving arm by arm), knuckle walking, leaping, hanging by the tail and one leg. Record the name of the primate and the locomotion pattern.

2. For 3 primates who were moving, describe how the method of locomotion you observed is related to the animals' anatomy. What physical features help the animals move, such as tail form, location of special friction skin (like skin on our palm), form of nails.

3. Select any adult primate to observe for 15 minutes. Then observe an infant primate (of the same species) for 15 minutes. Estimate about how much of the time is spent in each of the different locomotor activities--walking on all fours, walking or standing on two legs, brachiating, jumping from hind-limbs and landing on forelimbs, jumping from hind-limbs and landing on hind-limbs. Discuss the similarities and differences between the adult and infant's movement.

ZOO LAB: COMMUNICATION

Types of Communication Acts to Observe (the numbers and letters will be used as explained below):

I. Olfactory: taste and smell

- a. smelling of one animal by another
- b. smelling of other object and/or eating object and then same thing done by second animal
- c. "marking" - urinating, licking, or rubbing a part of the body against part of the environment which is then smelled by another animal

II. Tactile:

- a. grooming
- b. hand clasping or arm embrace

c. kissing
d. nipping
e. wrestling, rolling together
f. touching another animal

III. Visual:

a. postures - rigid, relaxed
b. gestures - aggressive: raised eyebrows or open mouth display
threatening: "rushes", shaking stick, slapping ground or cage
appeasement: bowing to ground, presenting hand, face, or hindquarters
c. facial expressions - stares (aggressive), grins (appeasement)
d. chasing
e. use of hands to signal communication

IV. Vocal-auditory:

a. speaking
b. listening
c. shouting
d. laughing
e. hooting or calling - series of similar noises mostly vowels
f. chattering - series of similar noises mostly consonants

How to Attack Problems:

1. Choose a group of animals which interests you. Don't worry too much about being able to "hear" voices, there is plenty of silent communication to watch.

2. Watch the group for 10 minutes learning to identify animals and "logical" behavior sequences. (you may want to assign names to animals

3. Begin to take notes - try to take notes either in terms of behavior sequences or time intervals (about 2 minutes).

example (note assignment of letters and numbers to communication acts):

a. A swings over to B who looks up IIIc)
They wrestle (IIe)
b. B bites at A IId)

4. Watch for 20 minutes. Afterwards add communication numbers and letters to the descriptions.

5. Do a similar observation on a human group.

6. Summarize the communicative acts for both nonhuman primate group and human group.

7. Try to summarize your observations and findings--what are the most common communication acts, which animals communicate the most, how do nonhuman primates differ in communication acts from humans?

ZOO LAB: MOTHER-INFANT INTERACTION

The relationship of the infant primate to other animals of its own species has been the subject of considerable experimentation and observation, both in captivity and in the wild. This lab involves a quantitative study of these relationships and an attempt to see patterns of interaction and socialization in a group of cage primates.

1. Observe any two different groups with infants for 20 minutes each. Record in detailed notes the behavior of the infant and those with whom it interacts over this time. Take notes particularly on the

   a) number of times infant contacts other animals (specify mother, adult, male, juvenile, etc.)

   b) Number of times infant breaks contact with other animals.

   c) Number of times other animal contacts infant.

   d) Number of times other animal breaks contact with infant. Describe the general nature of the contact in each instance. Also note if the infant is threatened or approached by other animals. Note which animals the infant has the most interaction with.

2. For each species, estimate the percentage of time spent by the infant in various activities, such as grooming, eating, playing, cuddling, sitting, etc.

3. Write a brief summary comparing the interactions of infants in the two groups.

ZOO LAB: GENERAL BEHAVIOR

1. Watch any group of three or more primates for 30 minutes. Try to assign a name to each animal observed, and if possible, note the animal's sex and approximate age. If your group has more than four animals in it, choose one or two animals to focus upon during your observation.

2. Describe how each animal is physically different from the others.

3. After about 5 minutes of observation, begin to take careful notes on what is happening in the group. Try to identify "behavior sequences" - a series of interactions or behaviors which seem to begin and end. What happens during each sequence, who is involved, how long does the behavior last?

4. Note what the animals are doing, what expressions and communication acts are involved, which animals are interacting most intensely.

5. Look for differences in behavior among the adult males, adult females, infants, and juveniles.

6. Try to summarize the group's behavior during the time you observed. Can you make any "educated guesses" about the dynamics of the group you were observing - i.e. which animals are related; which animals prefer to interact with one another; which animals are older,younger; which are dominant or submissive?

ZOO LAB C: DOMINANCE/SUBMISSIVE BEHAVIOR

Describe dominance/submissive behavior in a group of caged primates and discern the rank order (if any) of individuals in the group.

The following events or interactions are connected with dominance behavior in various species:

Approach-Retreat Interactions
1) Spatial supplanting of subordinate by dominant
2) Avoidance of dominant by subordinant

Aggressive actions on the part of one animal
3) Threats (e.g. stares, postural fixation, special vocalizations, etc.)

4) Displays (e.g. canine (yawn), tree shaking, chest beating, etc.)
5) Chasing

Approach-Approach Interactions
6) Presenting
7) Grooming
8) Mounting
9) Other submissive gestures (reach out a hand (chimps)
10) Control of desirable food (and females-though this is a more disputed concept which you probably won't be able to observe.)

Observe one group of animals (Geladas, Barbary apes, Colobus or golden marmosets) for 40 minutes. Make a chart with those 10 interactions across the top and the list of animals in the cage down one side. Note "dominance" interactions as they occur, under type of interaction and animals involved, e.g. under supplanting you might have a "d" for animal 4 and an "s" for animal 6, indicating that animal 4 spatially supplanted animal 6. Any given interaction may fall into more than one type: mark it under as many types as relevant but indicate that it is one behavior sequence (for instance, you might number interactions sequentially ld-le, 2d-2s, 3d-3s, etc.)

Rank animals in order of number of d's. Rank in order of number of s's. What do you perceive to be the rank order of the animals in this group? What kind of interaction is most closely correlated (by eye) with your rank order? Is the rank order of some animals (e.g. very young juveniles) improved by their association with a more dominant animal? Hand in notes and chart along with your conclusions. (Note: one problem you may find: the most dominant animal may be avoided by others, resulting in little interaction.)

CLASSIFICATION OF THE LIVING PRIMATES

ORDER: PRIMATES

SUBORDER: PROSIMII

FAMILY: Tupaiidae (tree shrews)

FAMILY: lemuridae (lemurs)

FAMILY: Indriidae (indris, sifakas)

FAMILY: Daubentoniidae (aye-aye)

FAMILY: Lorisidae (lorises, galagos, bushbaby, potto)

FAMILY: Tarsiidae (tarsiers)

SUBORDER: ANTHROPOIDEA

INFRAORDER: PLATYRRHINI (New World)

SUPERFAMILY: Ceboidea

FAMILY: Callithrididae (Marmosets, tamarins)

FAMILY: Cebidae (squirrel, spider, howler, Capuchin monkeys)

INFRAORDER: CATARRHINI (Old World)

SUPERFAMILY: CERCOPITHECOIDEA

FAMILY: Cercopithecidae (baboon, guenon, margabey, macaque)

SUBFAMILY: Cercopithecinae (baboon, macaque)

SUBFAMILY: Colobinae (Colobus, langurs)

SUPERFAMILY: Hominoidea

FAMILY: Hylobatidae (gibbons, siamangs)

FAMILY: Pongidae (orangutans, chimps, gorilla)

FAMILY: Hominidae (man)

(After J.R. and P.H. Napier, A Handbook of the Living Primates. New York: Academic, 1967, pp. 343-354.)

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ANTHROPOLOGY TEACHING ACTIVITY:

MOTHER-INFANT OBSERVATION

I. OBJECTIVES OF THE OBSERVATION:

1. To provide an experimental framework within which to study primate and human behavior.

2. To illustrate the importance and intensity of observation.

3. To provide background for studying human and nonhuman primate behavior, communication, and social relations.

II. Procedure:

Invite a mother and her infant (age 10 months to two years is optimal) to come to your classroom along with a bagful of favorite toys. Explain that students will be observing the infant playing. Ask students to choose one problem listed below and concentrate their observation for 10 minutes on that problem. Each student should take notes during the observation. At the end of 10 minutes take a break for students to write up a summary of their findings. Then each student chooses a second problem and repeats the procedure. Finally, students share their observations for each of the five problems and draw some general conclusions.

III. THE FIVE PROBLEMS:

1. PHYSICAL CHARACTERISTICS

What seems to be the baby's chief physical characteristics start with the head and proceed downwards. Describe the features "in action", which features seem most responsible for the differences in baby's behavior. What are the anatomical differences responsible for the differences in baby and mother's behavior and physical presence?

2. ACTIVITY: LOCOMOTION

What locomotion are the two engaged in? How much time is spent sitting; standing; walking on all four's; standing on feet, knees; lying down, etc. What types of locomotion seem most efficient for each subject? How are the locomotor activities related to the behavior going on? How is the method of locomotion related to anatomy?

3. ACTIVITY: BEHAVIOR

What activities are the two engaged in? Estimate the time for each type. Can you mark off behavior sequenced? What seems to mark the beginning of a sequence, and what motivates or brings about the beginning of a new sequence? What shifts the attention of each subject? (Remember that behavior also includes talking)

4. COMMUNICATION

List the types of communication acts which occur during your observation period. Communication includes non-verbal acts: visual, tactile, olfactory, vocal-auditory acts.

Try to note the frequency of each act. Which kinds of communication occur most often, which seem most effective, and why.

Who initiates communication more often? Who receives it more often?

The last two minutes of your time focus on the communication going on in your room outside the Mother-Infant group.

Can you draw any conclusions on the possible differences between mother-infant communication and adult human communication based on this observation? Is there anything you might hypothesize about early hominid communication based on this observation?

5. PATTERNS OF INTERACTION

What interactions occur between the two? How much time is spent interacting? Who initiates contact, who breaks it - how often for each subject? How is contact established (touch, smile, handing something, etc.) What interactions occur between either subject and others in the room - who initiates this contact, and why?

Do your observation taking careful notes so you can quantify the results: count time; number of interactions; number of times baby initiates contact, etc.

What overall conclusions can you draw?

IV. SUMMARY:

What adjectives would you use to describe the infant's behavior? The mother's? What was the dominant activity? How much interaction occurred and why? Did you enjoy the observation, why or why not? Why is observation difficult and what skills would be useful to have for doing long-term observation studies?

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RECONSTRUCTING BABYLONIAN SOCIETY FROM HAMMURABI'S CODE OF LAW

Objectives:

After discussing the function of punishment and law in human society, participating in a code analysis exercise, and comparing differences between the Babylonian and U.S.A. law systems, students will be able to:

1. Describe the various functions of law and a criminal justice system.
2. Illustrate various aspects of Babylonian society with data drawn from a code of law.
3. Synthesize conclusions drawn from a variety of laws into generalizations regarding a single society.
4. Analyze the differences between the Babylonian and U.S.A. law systems.

I. Discuss the following:

A. What is the function of punishment?

1. to prevent people from repeat a crime
2. to teach others right and wrong
3. to isolate the criminal from society
4. to seek revenge
5. to rehabilitate criminals

B. What is the function of law?

1. to prevent crimes
2. to prevent people's property, lives and families
3. to keep order and peace
4. to enable society to run smoothly, keeping people's dealings with one another orderly.

II. Activity:

Analyze the attached code for information about the various aspects of society listed below:

1. economy
2. religion
3. law
4. politics
5. social organization and relationships
6. values

III. Discuss the differences between the Babylonian and U.S.A. law systems:

1. U.S.A. punishments are more concerned with rehabilitation than punishment for revenge.

2. Their system includes more kinds of physical punishment.

3. We have more laws due to the complexity of our society.

4. Their laws are based more on class systems.

5. Their laws come from God--thus breaking a law constitutes a violation of God's will.

CODE OF HAMMURABI

(The Code of Hammurabi was discovered in 1901 by French archaeologists who were excavating the site of the ancient city of Susa in Iran. The code had been compiled by Hammurabi about 1750 B.C. and engraved on a stone pillar in cuneiform writing. A bas-relief at the top of the pillar shows a seated sun god presenting the code to Hammurabi, who stands before him in an attitude of reverent obedience. This version of the code was almost certainly based upon earlier Sumerian codes of law.)

1. If a man has accused another of laying a nertu (death spell?) upon him, but has not proved it, he shall be put to death...

3. If a man has borne false witness in a trial, or has not established the statement that he has made, if that case be a capital trial, that man shall be put to death...

6. If a man has stolen goods from a temple, or house, he shall be put to death; and he that has received the stolen property from him shall be put to death...

14. If a man has stolen a child, he shall be put to death...

21. If a man has broken into a house he shall be killed before the breach and buried there.

22. If a man has committed highway robbery and has been caught, that man shall be put to death.

23. If the highwayman has not been caught, the man that has been robbed shall state on oath what he has lost and the city or district governor in whose territory or district the robbery took place shall restore to him what he has lost.

24. If a life has been lost, the city or district governor shall pay one mina of silver to the deceased's relatives.

42. If a man has hired a field to cultivate and has caused no grain to grow on the field, he shall be held responsible for not doing the work on the field, and shall pay an average rent.

53. If a man has neglected to strengthen his dike and has not kept his dike strong, and a breach has broken out in his dike, and the waters have flooded the meadow, the man in whose dike the breach has broken out shall restore the grain he has caused to be lost.

55. If a man has opened his runnel for watering, and has left it open, and the water has flooded his neighbor's field, he shall pay him an average crop.

117. If a man owes a debt, and he has given his wife, his son, or his daughter as hostage for the money, or has handed somewhat over tow work it off, the hostage shall do the work of the creditor's house; but in the fourth year he shall set them free.

128. If a man has taken a wife and has not executed a marriage-contract, that woman is not a wife.

138. If a man has divorced his wife, who has not borne him children, he shall pay over to her as much money as was given for her bride-price and the marriage-portion which she brought from her father's house, and so shall divorce her.

142. If a woman has not been discreet, has gone out, ruined her house, belittled her husband, she shall be drowned.

168. If a man has determined to disinherit his son and has declared before the judge: "I cut off my son," the judge shall inquire into the son's past, and if the son has not committed a grave misdemeanor such as should cut him off from sonship, the father shall not disinherit the son.

195. If a son has struck his father, his hands shall be cut off.

196. If a man has knocked out the eye of a patrician, his eye shall be knocked out.

197. If he has broken the limb of a patrician, his limb shall be broken.

198. If he has knocked out the eye of a plebeian or has broken the limb of a plebeian, he shall pay one mina of silver.

199. If he has knocked out the eye of a patrician's servant, or broken the limb of a patrician's servant, he shall pay half his value.

215. If a surgeon has operated with the bronze lancet on a patrician for a serious injury, and has cured him, or has removed with a bronze lancet a cataract for a patrician, and has cured his eye, he shall take ten shekels of silver.

218. If a surgeon has operated with the bronze lancet on a patient for a serious injury, and has caused his death or has removed a cataract for a patrician with the bronze lancet, and has made him lose his eye, his hands shall be cut off.

229. If a builder has built a house for a man, and has not made his work sound, and the house he built has fallen, and caused the death of its owner, that builder shall be put to death.

230. If it is the owner's son that is killed, the builder's son shall be put to death.

237. If a man has hired a boat and boatman, and loaded it with corn, wool, oil, or dates, or whatever it be, and the boatman has been careless, and sunk the boat, or lost what is in it, the boatman shall restore the boat which he sank, and whatever he lost that was in it.

245. If a man has hired an ox and has caused the ox's death, by carelessness or blows, he shall restore ox for ox, to the owner of the ox.

251. If a man's ox be a gorer, and has revealed its evil propensity as a gorer, and he has not been blunted its horn, or shut up the ox, and then that ox has gored a free man, and caused his death, the owner shall pay half a mina of silver.

282. If a slave has said to his master, "you are not my master," he shall be brought to account as his slave, and his master shall cut off his ear.

Information from the
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TEACHING ACTIVITY

Instructions for NORTH AMERICAN MYTHS AND LEGENDS

1. Divide the class into six groups and assign each group one story. Each group chooses a leader.

2. Members of each group read the story silently taking notes on details which reflect: a) the natural environment; b) the relationship between the human and nonhuman world; c) explanations of natural phenomena; d) values of the society; e) special roles within the society f) view of the supernatural.

3. Each group discusses its myth for 10 minutes using the above categories as a guide.

4. Whole class convenes. Each group leader reads his/her story aloud and summarizes the group's ideas about the story. The classroom teacher can add other relevant details to more fully illuminate meaning and significance of the story.

5. Optional: Teacher might end the activity by reading the King James version of Genesis to illustrate all peoples have creation stories to explain origins. Also that the Judeo-Christian tradition has parallels to other stories such as the Earthmaker. These parallels should provide interesting class discussion.

ANTHROPOLOGY OUTREACH OFFICE
DEPARTMENT OF ANTHROPOLOGY
SMITHSONIAN INSTITUTION

NATIVE AMERICAN MYTHS AND LEGENDS

CREATION STORY (Netsilik Eskimos-Canada)

In the earliest times on earth, there were no animals in the sea. People did not need blubber for fires, because newly drifted snow would burn. Great forests grew on the bottom of the sea. From them came the pieces of driftwood that still wash up on our shores. In those days, there was no ice on the sea. This is a distant memory of the time when the first people lived on the earth.

Everything was in darkness then. The lands and the animals could not be seen. Both men and animals lived on earth, but there was no difference between them. Men could become animals and animals could become men, and they all spoke the same language.

In the very earliest times, men were not as good as hunters are today, and their weapons were few. So they had little food, and sometimes they had to eat the earth itself. Everything came from the ground, and people lived on the ground. They did not have all the rules to follow that we do today. There were no dangers to threaten them, but there were no pleasures either.

That was the time when magic words were made. Suddenly a word would become powerful and could make things happen, and no one could explain why. It was always dark until once a hare and a fox had a talk. "Darkness, darkness," said the fox. He wanted to steal from caches in the darkness. "Day, day," said the hare. He wanted the light of day so he could find a place to feed. And suddenly day came, for the hare's words were more powerful than the fox's. Day came, and was replaced by night, and when night had gone, day came again.

In those early times there were only men and no women. There is an old story that tells how women came from men. One time the world collapsed and was destroyed, and great showers of rain flooded the land. All the animals died, and the world was empty. Then two men grew up out of the earth. They married, for there was no one else, and one man sang a song to become a woman. After a while they had a child, and they were the first family.

In those early ages, women often could not have children so the earth had to help. Women went out searching for children who had grown up out of the earth. A long search was needed to find boys, but there was no need to go far to find girls. This is the way the earth gave children to the first people, and in that way they became many.

(Knud Rasmussen, compiler. THIS WORLD WE KNOW: BELIEFS AND TRADITIONS OF THE NETSILIK ESKIMO. Cambridge, MA: Education Development Center, 1967.)

THE SHAMAN IN THE MOON (Bering Sea Eskimos-Alaska)

A Malamut shaman from Kotzebue Sound near Selawik Lake told me that a great chief lives in the moon who is visited now and then by shamans who always go to him two at a time, as one man is ashamed to go alone. In the moon live all kinds of animals that are on the earth, and when any animal becomes scarce here the shamans go up to the chief in the moon and, if he is pleased with the offerings that have been made to him, he gives them one of the animals that they wish for, and they bring it down to the earth and turn it loose, after which its kind becomes numerous again.

The shaman who told me the foregoing said he had never been to the moon himself, but he knew a shaman who had been there. He had been up only as high as the sky, and went up that high by flying like a bird and found that the sky was a land like the earth, only that the grass grew hanging downward and was filled with snow. When the wind blows up there it rustles the grass stems, loosening particles of snow which fall down to the earth as a snowstorm.

When he was up near the sky he saw a great many small, round lakes in the grass, and these shine at night to make the stars. The Malemut of Kotzebue Sound also say that the north wind is the breath of a giant, and when the snow falls it is because he is building himself a snow house and the particles are flying from his snow shovel. The sound wind is the breath of a woman living in the warm southland.

(Edward W. Nelson, "The Eskimo About Bering Strait," SMITHSONIAN INSTITUTION 18TH ANNUAL REPORT OF THE BUREAU OF AMERICAN ETHNOLOGY, Wash., D.C., 1900.)

HOW THE SUN CAME (Cherokee)

There was no light anywhere, and the animal people stumbled around in the darkness. Whenever one bumped into another, he would say, "What we need in the world is light." And the other would reply, "Yes, indeed, light is what we badly need."

At last the animals called a meeting and gathered together as well as they could in the dark. The red-headed woodpecker said, "I have heard that over on the other side of the world there are people who have light."

"Good, good!" said everyone.

"Perhaps if we go over there, they will give us some light," the woodpecker suggested.

"If they have all the light there is," the fox said, "they must be greedy people, who would not want to give any of it up. Maybe we should just go over there and take the light from them."

"Who shall go?" cried everyone, and the animals all began talking at once, arguing about who was the strongest and ran fastest, who was best able to go and get the light.

Finally the 'possum said, "I can try. I have a fine big bushy tail, and I can hide the light inside my fur."

"Good! Good!" said all the others, and the 'possum set out.

As he traveled eastward, the light began to grow and grow, until it dazzled his eyes, and the 'possum screwed his eyes up to keep out the bright light. Even today, if you notice, you will see that the 'possum's eyes are almost shut, and that he comes out of his house only at night.

All the same, the 'possum kept going, clear to the other side of the world, and there he found the sun. He snatched a little piece of it and hid it in the fur of his fine bushy tail, but the sun was so hot it burned off all of the fur, and by the time the 'possum got home his tail was as bare as it is today.

"Oh, dear!" everyone said. "Our brother has lost his fine bushy tail, and still we have no light."

"I'll go," said the buzzard. "I have a better sense than to put the sun on my tail. I'll put it on my head."

So the buzzard traveled eastward till he came to the place where the sun was. And because the buzzard flies so high, the sun-keeping people did not see him, although now they were watching out for thieves. The buzzard dived straight down out of the sky, the way he does today, and caught a piece of the sun in his claws. He set the sun on his head and started for home, but the sun was so hot that it burned off all his head feathers, and that is why the buzzard's head is bald today.

Now the people were in despair. "What shall we do? What shall we do?" they cried. "Our brothers have tried hard; they have done their best, everything a man can do. What else shall we do so we can have light?"

They have do the best a man can do," said a small voice from the grass, "but perhaps this is something a woman can do better than a man."

"Who are you?" everyone asked. "Who is that speaking in a tiny voice and hidden in the grass?"

"I am your Grandmother Spider," she replied. "Perhaps I was put in the world to bring you light. Who knows? At least I can try, and if I am burned up it will still not be as if you had lost one of your great warriors."

Then Grandmother Spider felt around her in the darkness until she found some damp clay. She rolled it in her hands, and molded a little clay bowl. She started eastward, carrying her bowl, and spinning a thread behind her so she could find her way back.

She reached out gently, and took a tiny bit of the sun, and placed it in her clay bowl. Then she went back along the thread that she had spun, with the sun's light growing and spreading before her, as she moved from east to west. And if you will notice, even today a spider's web is shaped like the sun's disk and its rays, and the spider will always spin her web in the morning, very early, before the sun is fully up.

"Thank you Grandmother," the people said when she returned. "We will always honor you and we will always remember you."

And from then on pottery making became woman's work, and all pottery must be dried slowly in the shade before it is put in the heat of the firing oven, just as Grandmother Spider's bowl dried in her hand slowly, in the darkness, as she traveled toward the land of the sun.

(Alice Marriott and Carol K. Rachlin. AMERICAN INDIAN MYTHOLOGY.
New York: Thomas Y. Crowell Co., 1968.)

CREATION OF THE ANIMAL PEOPLE (Okanogan - S.W. Oregon)

The earth was once a human being. Old-One made her out of a woman. "You will be the mother of all people," he said.

Earth is alive yet, but she has been changed. The soil is her flesh; the rocks are her bones; the wind is her breath; trees and grass are her hair. She lives spread out, and we live on her. When she moves, we have an earthquake.

After changing her to earth, Old-One took some of her flesh and rolled it into balls, as people do with mud or clay. These balls Old-One made into the beings of the early world. They were the ancients. They were people, and yet they were at the same time animals.

In form, some of them were like the animals; some were more like people. Some could fly like birds; others could swim like fishes. In some ways the land creatures acted like animals. All had the gift of speech. They had greater powers and were more cunning than either animals or people. And yet they were very stupid in some ways. They knew that they had to hunt in order to live, but they did not know which beings were deer and which were people. They thought people were deer and often ate them.

Some people lived on the earth at that time. They were like the Indians of today except that they were ignorant. Deer also were on the earth at that time. They were real animals then too. They were never people or ancient animal people, as were the ancestors of most animals. Some people say that elk, antelope and buffalo also were always animals, to be hunted as deer are hunted. Others tell stories about them as if they were ancients of half-human beings.

The last balls of mud Old-One made were almost all alike and were different from the first ones he made. He rolled them over and over. He shaped them like Indians. He blew on them and they became alive. Old-One called them men. They were Indians, but they were very ignorant. They did not know how to do things. They were the most helpless of all creatures Old-One made. Some of the animal people preyed on them and ate them.

Old-One made both male and female people and animals, so that they might breed and multiply. Thus all living things came from the earth. When we looked around, we see everywhere parts of our mother.

Most of the ancient animal people were selfish, and there was much trouble among them. At last Old-One said, "There will soon be no people if I let things go on like this."

So he sent Coyote to kill all the monsters and other evil beings. Old-One told Coyote to teach the Indians the best way to do things and the best way to make things. Life would be easier and better for them when they were no longer ignorant. Coyote then traveled on the earth and did many wonderful things.

(Ella E. Clark. INDIAN LEGENDS OF THE PACIFIC NORTHWEST. Berkeley: Univ. of California Press, 1953.)

HOW COYOTE GOT HIS SPECIAL POWER (Okanogan - S.W. Oregon)

In the beginning of the world, Spirit Chief called a meeting of all the animal people.

"Some of you do not have names yet," he said when they had gathered together. "And some of you do not like the names you have now. Tomorrow, before the sun rises I will give a name to everyone. And I will give each an arrow also."

"Come to my lodge as soon as the darkness is gone. The one who gets there first may choose the name he wants and I will give him the longest arrow. The longest arrow will mean that he will have the most power."

As the people left the meeting, Coyote said to his friend Fox, "I'm going to be there first. I don't like my name. I want to be called Grizzly Bear or Eagle."

Fox laughed. "No one wants your name. You may have to keep it."

"I'll be there first," repeated Coyote. "I won't go to sleep tonight."

That night he sat by his fire and stayed awake for a long time. Owl hooted at him. Frog croaked in the marshes. Coyote heard them all. But after the stars had closed their eyes, he became very sleepy. His eyelids grew heavy.

"I will have to prop my eyes open."

So he took two small sticks and propped his eyelids apart. "Now I can stay awake."

But soon he was fast asleep, and when he awoke, the sun was making shadows. His eyes were dry from being propped open, but he ran to the lodge of the Spirit Chief.

"I want to be Grizzly," he said, thinking he was the first one there. The lodge was empty except for Spirit Chief.

"That name is taken, and Grizzly Bear has the longest arrow. He will be chief of the animals on the earth."

"Then I will be Eagle."

"That name is taken, and Eagle has the second arrow. Eagle will be the chief of the birds."

"Then I will be Salmon."

That name is taken, and Salmon has the third arrow. Salmon will be the chief of all the fish. Only the shortest arrow is left, and only one name--Coyote."

And the Spirit Chief gave Coyote the shortest arrow. Coyote sank down beside the fire of the Spirit Chief. His eyes were still dry. The Spirit Chief felt sorry and put water in his eyes. Then Coyote had an idea.

"I will ask Grizzly Bear to change with me."

"No," said Grizzly, "I cannot. Spirit Chief gave my name to me."

Coyote came back and sank down again beside the fire in the big lodge. Then Spirit Chief spoke to him.

"I have special power for you. I wanted you to be the last one to come. I have work for you to do, and you will need this special power. With it you can change yourself into any form. When you need help, call on your power."

"Fox will be your brother. He will help you when you need help. If you die, he will have power to bring you to life again."

"Go to the lake and get four tules. Your power is in the tules. Then do well the work I will give you to do."

So that is how Coyote got his special power.

(Ella E. Clark. INDIAN LEGENDS OF THE PACIFIC NORTHWEST.
Berkeley: Univ. of California Press, 1953.)

WINNEBAGO INDIAN CREATION STORY

In the beginning Earthmaker was alone. Earthmaker was sitting in space when he came to consciousness. Nothing was to be found anywhere. He began to think of what he was to do and finally he cried. Tears flowed from his eyes and fell below where he was sitting. After a while he looked below and saw something bright. The bright objects were tears, of which he had not been aware and, which falling below, had formed the present waters. They became the seas of today.

Then Earthmaker began to think again. He thought, "Thus it is whenever I wish anything. Everything will become the water of the seas." So he wished for light and it became light. Then he thought, "It is as I have supposed; the things that I wished for, come into existence as I desired." Then he again thought and wished for this earth and the earth came into existence. Earthmaker looked at the earth and he liked it, but it was not quiet. It moved about as do the waves of the sea. Then he made the trees and he saw that they were good. But even these did not make the earth quiet. It was however almost quiet. Then he created the four cardinal points and the four winds. At the four corners of the earth he placed them as four great and powerful spirits, to act as weights holding down this island earth of ours. Yet still the earth was not quiet. Then he made four large beings and threw them down toward the earth and they were pierced through the earth with their heads eastward. They were really snake-beings. Then it was that the earth became still and quiet. Now he looked upon the earth and he liked it.

Again he thought of how things came into existence as he desired. So he spoke: "I shall make a man like myself in appearance." So he took a piece of earth and made it like himself. Then he talked to what he had created but it did not answer. He looked at it again and saw it had no mind or thought. So he made a mind for it. But again it did not answer. Then he made it a tongue. Then he talked to it again but it did not answer. So he looked at it and he saw that it had no soul. So he made it a soul. He talked to it again and then it very nearly said something but could not make itself intelligible. So Earthmaker breathed into his mouth and talked to it and it answered.

Information from the
National Museum of Natural History
SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

TEACHING ETHNOGRAPHIC INTERVIEWING

Ethnographic Interviewing has been taught as a regular semester-long course at Macalester College for the past 22 years. The course is designed to enable students with little or no anthropological background to "enter the field" and successfully elicit cultural data from members of an American microculture. Although the course stresses interviewing as a field technique, standard and participant observation can be part of the ethnographic process. The purpose of the course is to enhance student understanding of what culture is and how it functions for members of a group, as well as to acquaint students with a valuable qualitative field method. Classes are largely devoted to problem solving, rather than lecturing or discussions of reading.

CULTURE AND ETHNOGRAPHY

When students begin the ethnographic interviewing course, I give them a detailed syllabus describing course goals and a sequence of research tasks. The first task is for students to read about the concept of culture and its place in ethnographic research. I use a so-called "cognitive" definition of culture (one that sees culture as a form of knowledge) for this course because I think it gives a clearer idea of what students should look for when they interview. I define culture as *the learned knowledge that members of a group use to generate behavior and interpret experience*. This definition stresses that culture is **knowledge**, not behavior or material goods. It argues that culture is **learned** and not inherited genetically. It says culture is **shared** by members of a group; it is not knowledge unique to an individual. Although culture is knowledge, not behavior, it is intimately tied to action. The definition asserts that group members use culture to **generate behavior** because culture provides a framework of rules to guide appropriate activity. Similarly, culture permits members of groups to **interpret** their surroundings and the actions of others. It provides the categories, rules, and plans by which group members conduct their lives.

Ethnography is the task of discovering and describing a culture. Ethnographers try to learn about the behavior of a group by looking at it through the eyes of the members themselves. Instead of going to the field with predefined problems, hypotheses and questions as many social scientists do, ethnographers try to elicit an understanding of what is going on from the actors themselves. They try to avoid projecting their own cultural categories or interpretations onto the world of their informants. They play the part of students; cultural informants become teachers.

Ethnographic Interviewing uses a focused ethnographic approach called ethno-science to involve students in a series of clearly defined learning steps. These steps require students first to identify a microculture, then choose a cultural informant, conduct a series of interviews, ask three kinds of ethnographic questions, record and analyze ethnographic data, discover cultural themes, and finally write an ethnographic report. Although each student investigates a different microculture, teaching the ethnographic method one step at a time means that all students will encounter at least some of the same fieldwork problems at the same time. What follows is a discussion of these steps.

CHOOSING A MICROCULTURE

To conduct ethnography, students must find a particular culture to study; choosing a culture depends on the ability to spot culture-bearing groups. Since Macalester courses only last for three and one-half months, I ask my students to study the culture of smaller groups called **microcultures** because they are more manageable for the amount of time. Cultures come in different sizes, and some are found inside others. For example, citizens of the United States share a **national culture**, the cultural knowledge that sets them off as Americans. Americans may also be part of a major ethnic subgroup, such as African Americans or Mexican Americans. We often call these **subcultures**. There are, however, many other, smaller groups found inside the larger ones that members participate in only part of the time. I call these **microcultures** and make them the focus of the ethnography course because they are common, interesting and easy to access. Occupational groups, such as a group of bank tellers, can be called microcultures. So can recreational groups, such as a local chapter of a motorcycle riding association; educational groups, such as the third graders at a nearby school; kinship groups, such as nuclear or extended families; or political action groups, such as a local chapter of the Sierra Club. Macalester students have studied the cultures of hairdressers, bouncers, midwives, real estate agents, buckskinners (people who come together to create life as it was in the 1840s frontier), emergency room doctors, homeless shelter residents, sound technicians, musicians, airline pilots, camp counselors, zoo keepers, car salesmen, custodians, and hundreds more.

I warn students to keep several things in mind as they choose microcultures because some are easier to study than others. It is easier to study enduring, clearly structured microcultures because informants recall them more clearly. It is wise to avoid microcultures associated with public relations or ideologies such as religion, because informants will give a "party line" rather than good "inside cultural" information. Since informants remember better what they are doing at the moment, it is easier to study currently operating microcultures. Since the ethnoscience interviewing method depends on discovering the inside language of informants, it is better to study social microcultures, which promote regular conversation, and ones characterized by the use of English. It is harder to study "up" than "down" when you do ethnography; bank presidents are more guarded than bank tellers. Artistic cultures are difficult to interview because so much of the culture of art and music is tacit and "felt." I also suggest that students look at microcultures they know little about because they will find it easier to spot unfamiliar cultural elements. Finally, I urge students to stay away from microcultures they are already a part of because it is often difficult for them to switch roles from group member to outside interviewer.

Most of my students choose a microculture and then look for an informant. An informant is someone who belongs to a particular culture and willingly teaches the anthropologist about that culture. Informants can make or break the research experience. It is wise to find an informant who is verbal, available, knowledgeable about his or her microculture, and interested in being interviewed.

I usually limit students to a single informant each semester because they lack the time to establish rapport with more than one. Students recruit informants from the community surrounding the college or may even find other students or family members to interview. Often they approach an informant "cold turkey." For example, last semester a student who wished to know about tattooist culture simply went into the tattoo parlor and asked the tattooist if she would be willing to engage in a series of interviews. Many students find informants by one. Still other students approach research by thinking of someone who would make a good informant, then asking that person what microculture they know about.

ETHICS AND BEGINNING THE STUDY

When students begin their ethnography, they have to be open about what they intend to do, and they have to recognize their own ethical responsibilities. I require students to tell informants that they are Macalester students doing a research project in an anthropology class. I also have them read the statement on ethics published by the American Anthropological Association. I stress the importance of protecting the informant at all costs. This often means covering the real identity of people and places and refraining from inquiry into damaging subjects. Finally, I will not permit students to study illegal microcultures, although many find them interesting. The risks to the students themselves are much too great.

RESEARCH STEPS

The interviewing process is divided into three steps: discovering folk categories, eliciting taxonomic structure, and finding attributional meaning [see "Doing Ethnography at Macalester College" in the Winter 1992 issue of *Anthro.Notes*]. These steps relate to the central thesis of ethnoscience that a significant part of people's culture is coded in language. If you can learn the words people use, place closely related words in taxonomies and determine their meaning, you can gather a great deal about a culture quickly and systematically. Let's look at these steps one at a time.

Discovering categories. I teach my students that human cultural knowledge is stored in thousands of mental categories. For example, *grass* is the name for a category of plant growing in front of my house. Although each little plant is slightly different, I and my neighbors can efficiently talk about the plants by categorizing them as a single kind of thing. We call the words used to name categories **folk terms**.

The first step in the interviewing process is to discover folk terms. To do this, students ask a kind of ethnographic question. **Descriptive questions** are any questions designed to get informants talking about their cultural worlds using their own folk terms. Since ethnographers try to elicit the informant's viewpoint, descriptive questions try not to lead. To elicit folk terms, the best strategy is to ask about what people do, not what they think or what their opinions are.

The most general descriptive question and one which students ask first is the **grand tour question**. This asks about an informant's average day or about the layout of a particular place. For example, when asked what he did from the time he arrived at work until he left, a stock broker described arriving at the "office," stopping by the "cage" to pick up his mail, reading his "writes" and "confirms," "posting his books," reading the "*Journal*," and "calling clients." All these are folk terms for stock broker categories.

Once the initial grand tour is completed, student ethnographers ask **minitour questions**, which are questions about some of the folk terms they learned from the grand tour question. "Could you describe what brokers do when they call clients?" would be a minitour question. So would, "Could you describe the cage for me?" Informants then go into more detail about these things, using additional and often more precise folk terms.

Story questions and native language questions are also kinds of descriptive questions. "Has anything unusual happened to you or other brokers recently?" would be an example of a story question. Stories often yield a wealth of folk terms. Native language questions are used to check whether or not a particular word is really a folk term, one used by members of the culture. "If you were talking to another broker, would you refer to that place as the cage?" would be an example of such a question.

I have students tape record interviews and transcribe them completely, so they don't miss folk terms. After they have completed their first interview, I have them make an overhead transparency of the first page of their interview and show it to the class. They discuss with their classmates how their interview went and ask for help with problems. This gives students a feel for different interviewing and informant styles, and a sense of involvement in each other's work.

Discovering Taxonomic Order. The next step in the research process is to discover taxonomic structure for folk terms. The task derives from the fact that some folk categories classify other categories by a single relationship. We call the larger categories **domains**. For example, at the brokerage office, the domain "broker" is a cover term for "big hitters," "rookies," "brokers" (average brokers), and the "manager." Together these terms form a small taxonomy, which is a hierarchical chart based on the inclusion of some terms by others and on the notion that terms on any level contrast with each other. One student, Sharon Saydah, recently elicited the a taxonomy of kinds of customers from a car salesman. Customers or buyers could be divided into 14 categories including mom and pop (empty nestors), engineer (pipe smokers), parents with high school grad, guys wearing Raiders jackets (gang members), outstaters (weekenders), brochure collectors, and first time buyers. To create taxonomies, students must look for domain cover terms. Plural nouns often give clues as the term *customers* indicates above and the relationship "kinds of" implies. I also have my students look for taxonomies built on other relationships in addition to "kinds of"; for example, "ways to" do things, "steps in" doing things, or "parts of" things.

To fill out taxonomies, I have students use taxonomic or structural questions. If they already have discovered a domain and a relationship, they can ask **descending structural questions**. For example, once she discovered the term "customers," Sharon Saydah asked "What kinds of customers are there?" which is a typical descending structural question. If students discover a list of things that all appear to be related in the same way, they can ask an **ascending structural question** to discover the domain that ties them together, such as "What do all these terms have in common?"

After a second and third interview, using a mixture of descriptive and structural questions, I have students construct a taxonomy to show to the class. Since it is easy to include information in a taxonomy that does not belong, discussion about taxonomic problems can take substantial time.

Discovering Attributional Meaning. So far, all that students may know about some of the terms they have collected is what they sound like and how they relate to other terms in a taxonomy. The final interview step involves discovering more about what terms mean by finding out the important attributes that relate to them and that help distinguish between the terms. For example, one student found from a touring motorcycle club member that a *1991 Interstate* is a kind of Honda Gold Wing motorcycle (its place in a taxonomy) that has an opposed six cylinder engine, is water cooled and shaft driven, is very smooth, is very heavy, has a comfortable seat, has a radio but no cruise control or CB, is very reliable, handles well, and has large luggage capacity. All of these are important attributes that give the *Interstate* meaning in the culture of touring club members.

I tell my students that it is easier to elicit detailed attributes of terms if you have informants compare and contrast a set of closely related categories, and this is where taxonomies come in. I have my students take a "contrast set" of categories from a taxonomy, then ask attribute questions about them to elicit dimensions of contrast. Questions might ask informants the difference between two terms, or to take three terms and point out which two are most alike and how they differ from the third. Another good attribute question asks informants which categories are best and why. The "why" question should yield sets of important attributes.

When they are done, students display their attributes and original contrast set in paradigms, which are charts designed for this purpose. A paradigm of the contrast set, "kinds of securities," elicited from a stock broker, would look like this.

Paradigm of Kinds of Securities

Kinds of Securities	Safety	Return	Capital Gain	Insured
bonds	high	medium	sometimes	no
stocks	lower	low	yes	no
CDs	v.high	medium	no	yes

In this paradigm, the original contrast set is the three kinds of securities (bonds, stocks, and CDs); the dimensions of contrast are "safety," "return," "capital gain," and "insurance"; the actual attributes for each kind of security (high, low, medium, etc.) are listed in the chart.

WRITING THE PAPER

Once students have completed the various research steps, I ask them to continue interviewing, using all the kinds of ethnographic questions as they apply. They continue to record interviews and build their data base. Toward the end of the semester, I have each student look for the problems or adaptive challenges that his or her particular culture seems designed to handle. For example, the railroad switchman culture studied by one student seemed largely organized to manage the problem of managing time and relations to an uncaring employer. Stock broker culture seemed to adapt brokers to the need to buy and sell stock for valued clients in an uncertain market better suited to long-term holding. Again, I ask students to make lists of "cultural problems" and share these with the class. I also ask students to look for cultural themes, the general propositions or core values that seem to tie different parts of an informant's cultural knowledge together.

The final product of student research is an ethnographic paper organized around some general observations about a micro-culture, but a paper that also contains ample cultural illustrations in the form of descriptions, taxonomies, paradigms, and informant quotes. If the paper is successful, the reader ought to be able to see the world, including its challenges and solutions, through the eyes of the informant and people like the informant. I feel the course is successful if after students have taken it they walk into new situations and ask themselves, "I wonder what the inside rules are around here? What am I supposed to do and say and why?"

Recently I visited a local restaurant where I found one of my ex-students waiting on tables. She came over and quietly spoke to me. "You are sitting in section six. This section has the most 'customers' during 'evening rush,' is good if you want to make 'high tips,' is too far from the kitchen for comfort, and requires you to walk around an awkward corner to reach it." Only a student who is also an ethnographer would say a thing like that!

ADDITIONAL READINGS:

Spradley, James P. and David W. McCurdy, *The Cultural Experience: Research in Complex Society.* Chicago: SRA 1972. Reissued by Waveland Press, 1988. This book contains four chapters for students describing how to do ethnographic research as well as 12 papers by Macalester undergraduates, which serve as examples.

Spradley, James P., *The Ethnographic Interview*, New York: Holt 1979. A more detailed, step-by-step set of instructions for doing ethnography based on teaching experiences at Macalester College.

Reference cited:

Sharon Saydah, "Closing the Deal: Ethnography of Car Salespeople "Unpublished Macalester College Paper, 1991.

David W. McCurdy
Department of Anthropology
Macalester College
St. Paul, Minnesota

(Originally published in the Spring 1992 issue of *Anthro.Notes*, Vol. 14, No. 2.)

Information from the

National Museum of Natural History

SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

TEACHING ACTIVITY: RELATIVE DATING IN ARCHEOLOGY

The question, How old is it?, is basic to the science of archaeology. Dating methods, such as radiocarbon dating, dendro-chronology or tree-ring dating, and potassium-argon dating, that may furnish an absolute date for an archaeological site, are a contribution of the physical and the natural sciences. But absolute dating methods are not always useful; the particular circumstances to which they apply do not exist at every site. In such cases, archaeologists may employ relative dating techniques. Relative dating places assemblages of artifacts in time, in relation to [artifact] types similar in form and function.

The classroom exercises below will focus on stratigraphy and seriation, dating techniques used by archaeologists to establish a relative chronology.

I. Stratigraphy or the Law of Superposition

Stratigraphy can be described as a "layer cake" type arrangement of deposits called strata, with the older layer beneath the latest. This technique helps the archaeologist arrange the site in a vertical temporal sequence, which may then be compared to sites of similar age or type. You might ask students to picture a pile of newspapers that have been stacked every day for a week. The oldest newspaper will be on the bottom, the remainder stacked in relative chronological order from the oldest to the latest edition. This is the concept of stratigraphy--or the Law of Superposition.

Stratigraphic sequences in the field, however, are sometimes unreliable. Suppose the inhabitants of a previous site dug a large hole. The top of the heap of excavated dirt would date the oldest. Or perhaps a burrowing animal tunneled down through a site, causing artifacts buried above to fall to lower levels. Natural processes like frost heaving, erosion, and the down-slope movement of soils in colder climates (solifluction) can alter the original context in which the artifacts were deposited.

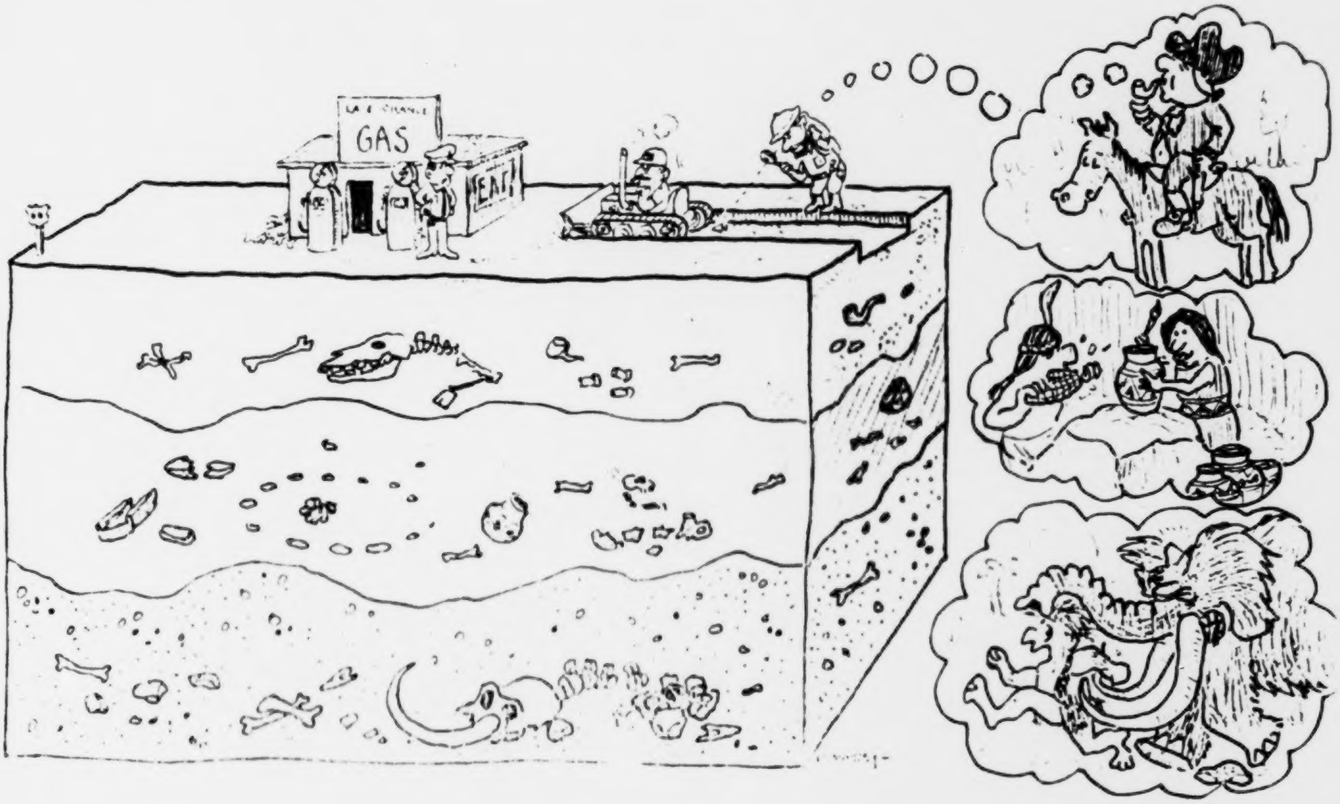
Stratigraphic levels can be horizontal as well as vertical. On beaches, where the configuration of the shoreline has changed through time, the earliest site may be inland, the later site closest to shore. The stratigraphic levels would then be spatially horizontal, conforming to the changing coastline. Horizontal stratigraphy may also occur when a later culture settles next to an earlier abandoned site, thereby appearing to be contemporary to the older site. Despite problems of interpretation, stratigraphy is a powerful archaeological tool in unlocking the mysteries of past lifeways.

Exercises:

1. Ask the students to think of ways that the vertical sequence of newspapers could be disturbed. (If the newspapers were not dated, the chronological sequence could probably still be deduced from their content.)

2. Using the example of the stack of newspapers, ask the students how they might apply relative dating using the concept of horizontal stratigraphy.

3. There are many possibilities for a theoretical sequence, once the students are familiar with the material culture and history of groups inhabiting the United States at various times. Better yet, use the chronology developed for your local area. The students may then generate a "time line," interpreting the ways in which past peoples may have used the artifacts at their disposal in their daily lives. Have your class develop a poster showing a theoretical stratigraphic deposit, or archeological sequence. Then ask them to analyze the cultural materials to deduce what the lives of the people of that time were like. Below is an example of a possible sequence that could be illustrated on a poster.



Level I (earliest): pictures of fireblackened rocks in a rough circle suggesting a hearth; scattered stone tools; and scattered animal bones and fruit pits. These artifacts suggest a people who hunt and gather for a living; who own few material possessions, suggesting mobility; and who have mastered the use of fire and tool making.

Level II (middle): pictures of sherds (broken pieces) of decorated pottery; a mortar and pestle for grinding grain; scattered beads and carved figures; post holes (shown as a regularly patterned darkened areas of soil) for a dwelling; scattered bones of wild game. These artifacts suggest people who are settled, at least part of the time. They make pottery, which is not easily portable, as well as decorative items. They have access to a regular food source, as the grinding equipment shows, but probably still also hunt for wild game.

Level III (latest): pictures of a pipe stem (which can be assigned a date of 1794 by its diameter); a coin dated 1802; a bullet casing; a few grains of corn; the skeletal remains of a horse; a metal coffee pot lid. What can be said of these people? What cannot be inferred from this level? The coin is significant because it provides the earliest potential date of the site. The coin was made in 1802, but could have been dropped any time after that date, as the pipe stem must have been dropped later than its date of manufacture. This concept called the terminus post quem (the date after which) is of particular importance to archaeologists dealing with the historic period.

Your local archeologist may be able to furnish suitable materials, or the sequences in the publications listed below may be used for illustration. The time line generated by your students will introduce them to the important concept of stratigraphy, as well as to the goal of archaeology: to reconstruct past lifeways and place them in a chronological framework in order to better understand the present.

4. Archaeologists may date deposits on the basis of the newest artifact found in the level. To illustrate this concept, collect a handful of coins of varying dates. Which is the oldest? Which is the latest? If they were all buried together, what date could be placed on the level in which they were found? The answer is that we can only say that the coins were deposited sometime after the date of the newest coin.

5. For younger students, the concept of stratigraphy may be reinforced by gluing the pictures of artifacts to cardboard and cutting them up as one would make a puzzle. These could then be scattered over layers made of crumbled tissue paper, to be "excavated" and "mapped" in levels by the class. A grid of rubber bands or string may be placed over the "site" to aid in the accurate mapping of the artifacts. Students may be divided into teams of excavators and mappers with as many "sites" as feasible. The students then could make a time line based on the interpretation of their finds.

II. **Seriation**

When a stratigraphic sequence is lacking, another relative dating technique known as seriation may be applied. This technique dates a site based on the relative frequency of types of artifacts whose dates of use or manufacture are known. The basic assumption underlying seriation is that the popularity of culturally produced items [such as clay pipes or obelisk gravestone markers in America] varies through time, with a frequency pattern that has been called the "battleship curve." An item is introduced, it grows in popularity, then its use begins to wane as it is replaced by another form. Certain types of artifacts have been identified as particularly useful temporal markers, for example, gravestones, projectile points, lamps, pottery sherds.

Before being able to interpret materials found at a site, an archaeologist faces the task of sorting the artifacts into manageable units for analysis. This is frequently a difficult task. Sorting is usually based on form and function. What does it look like? What is it made of? Is it decorated in any way? Have you ever seen it before?

Exercises:

1. To acquaint your students with the problems faced by archaeologists in determining the form and use of an object, ask each one to bring in an unusual item or two, whose function may not be well known. Possible objects are: old kitchen implements, personal items [shaving brush, buttonhook], parts of toys, travel souvenirs, and natural objects such as unusual rocks.

Ask the students to exchange their items with others in the class to guess their use. Then ask the students to arrange them in sets according to distinctive characteristics. The kinds of questions they should ask are: Is it made of wood, paper, cloth, metal, pottery? Is it large or small? Is it for personal care, decoration, or amusement, or does it have a utilitarian purpose? How was it made? Were the materials used in its manufacture from the local area or from far away? Where was the object itself made? How did it get here? Who made it, a specialized craftsman or an ordinary member of the society? The categories for classification will be suggested by the objects in the assemblage. Are there any patterns apparent in the objects the students have brought to class? Is any item of a greater frequency?

2. Ask the students what they can deduce about the people who use the objects. This exercise will introduce students to the concept of deducing the lifeways of people from the artifacts of material culture, which were used in everyday activities.

For further information:

James Deetz. *Invitation to Archaeology*. New York: The Natural History Press, 1967.

David Hurst Thomas. *Archaeology*. New York: Holt, Rinehart, and Winston, 1979. (more technical)

Robert L. Humphrey and Mary Elizabeth Chambers. ***Ancient Washington:* American** *Indian Cultures of the Potomac Valley*. Washington, DC: George Washington University, 1977. (local study containing cultural sequence of eastern U.S.)

Naturalist Center, National Museum of Natural History, 10th & Constitution Ave., N.W., Washington, DC 20560; (202) 357-2804. (Reference materials, self study guides on Indian pottery and stone artifacts, and on human skeletal materials.)

Public Information Office, Department of Anthropology, Smithsonian Institution, Washington, DC 20560. ("Local Archeology Resource Packet: District of Columbia, Maryland, and Virginia"; teacher bibliography and classroom materials on archeology)

Prepared by:

Cathy Griggs
George Washington University
Washington, DC

(Originally published in the Fall 1988 issue of *Anthro.Notes*, National Museum of Natural History.)

Information from the

National Museum of Natural History

SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

TEACHING ACTIVITIES: ARCHEOLOGY IN THE CLASSROOM

Archeologists often try to interpret the material remains that they find in terms of the activities carried out by ancient people. But not all activities generate material remains nor are all activities carried out in separate locations. Some spaces may be used for many purposes, while others are reserved for a more limited range of activities. Finally, the debris from activities is not always thrown away on the spot; in fact, we devote a lot of effort to training our children NOT to throw things away on the spot. Trash cans are a monument to something, namely the dump, which could only develop once people lived in one place for a long enough time to be bothered by garbage. Often the most concentrated archeological remains in an area really represent the dump.

The following two exercises are designed to demonstrate what can be learned from material remains at an archeological site.

Comparative Garbage Exercise (grades 4-12)

Purpose: To explore the relationship between material remains and activities in different areas.

Equipment: One or two days of trash and garbage from at least two wastebaskets located in different areas of a school or home, for example: the student lounge and the teachers' lounge, the lunchroom and the classroom, the living room and the bathroom. Do not tell the class where the bags came from. Also recommended, 3 or more pairs of rubber gloves and one large plastic drop cloth for each trash bag.

A. Procedure: Divide into as many groups as there are trash bags. Spread the dropcloths on the floor and dump out the trash. Each group should analyze the trash in the following terms:

1. Number of different kinds of trash; for example, vegetable remains, animal remains, paper food containers, plastic food containers, metal food containers, beverage containers (group or individual sized?), paper with writing, paper with printing, pencils, cardboard tubes, etc.

2. Apparent functional groupings of trash; for example, remains of meals, remains of snacks, remains of drinks, remains of work, remains of games, debris from cosmetic activities, discarded printed matter, etc.

3. Proportional representation of each functional group. Is most of the trash food? Or is most of it reading material?

B. Analyze the information from each trash bag.

1. What does it represent in terms of activities? Does it represent more than one activity? Which activities were most frequently represented? Do you think all the activities were carried out near the trash can or in a different space? If debris from an activity was transported to the trash can, was it all transported or was some left on the activity site or disposed of in another way?

2. Does the trash reflect group activities or individual activities? Was the context of activity the family or the society? If the society, what is the importance of these activities to the society at large?

3. The group could also interview the actual users of the space asking what they did in a particular area to show how physical remains give a different picture from oral history, i.e. What did you eat or drink?

C. Now compare the results of two or more bags.

Where did each bag come from? If the class has problems with this, you could provide a list of choices (i.e. who used the space--teachers, students, 7th graders, children, parents,--how did they use it?)

Sandbox Activity: Creating And Digging An Archeological Site
(grades K - 8)

Divide a sandbox into four or more squares, each big enough for two or three students to work in. Use string secured by thumbtacks or weights to mark the division.

Before the students arrive, bury a few items suggestive of a particular room or area in each square. Examples: bones, fruit pits, measuring spoons, food package wrap, broken china fragments, etc. (kitchen); fragments of toys, Legos, stuffed animal eyes, game pieces (children's play area); pens, pencils, old T.V. or stereo knobs, picture frames, paper clips, etc. (living room, den or study); toothpaste tube cap, empty shampoo bottle, removable rod from toilet roll holder, soap dish, etc. (bathroom; assorted screws, old screwdriver, hammer head, carpenter's rule, etc. (garbage or workbench area); clothespins, measuring cup, miscellaneous buttons s ewing area or laundry); old door knob, keys, umbrella handle (front hall).

Hand students archeologist's tools (trowel, small shovel, screen) and assign them to squares. Each square team has a plastic bag for "finds."

After about 20 minutes, depending on age of students, each team has to guess which room of the house they have excavated and tell what clues led them to their answer. Old students could be asked to guess how many people lived in the house, the ages of the occupants, and something about the kind of life they led, for example, kinds of foods eaten and home entertainment.

(Originally published as "Teacher's Corner: Archeology in the Classroom" by Alison Brooks in the fall 1986 issue of *Anthro.Notes*, vol 8, no. 3.)

Information from the

National Museum of Natural History

SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

RANDOM STRATEGIES IN ARCHEOLOGY

I. To introduce the principles of archeology and the importance of material culture:

A. Have each student, at home, list on a 3x5 card ten of his/her personal possessions which would survive a fire (these can be parts of things, such as the pulls on a chest of drawers, etc.). Do not put names on cards. You might put in a card for yourself also.

In class the next day redistribute the cards at random. Make sure that no student has his/her own card. Have students write a description of the person whose list they receive. Mention such things as: can you tell the age and sex of the person? his/her likes and dislikes? the kinds of activities he/she engages in? his/her hobbies?

Then have students read both the artifact lists and their interpretations of them. Discuss with students the accuracy of their interpretations, the nature of the evidence they had to work with, the problems associated with interpreting fragmentary evidence, etc. You might also discuss other sources which could help in interpreting the evidence, such as wills, deeds, census records, public school records, etc.

B. Ask students to suggest definitions of archeology and list these on the board. Then show one of the following films: "Doorway to the Past," "Search for a Century," the Martin's Hundred early 17th century site filmed as it was excavated, (both films issued by Colonial Williamsburg); "Other People's Garbage" (Odyssey film available from Documentary Educational Resources, 5 Bridge St., Watertown, MA 02172). After discussing the film, have students re-evaluate their original definitions, making changes where necessary.

II. To get students involved in the techniques and questions of archeology:

A. Divide students into teams. Each team is secretly assigned to a different area of the school grounds (i.e., cafeteria, playground, parking lot, front of school along road, etc.). Each team is to survey its assigned area and come back with:

--a collection of the artifacts they picked off the ground from their area.
--a description of the physical characteristics of the area they surveyed (caution: do not refer to the area by name; only describe).

Then: exchange team artifact lots and site descriptions. Each recipient group analyzes the evidence from the surveys and tries to guess:

a. the functional name of the area surveyed.
b. the kinds of behavior/activities which took place in the area; and
c. how recently this behavior took place, and how long (time span) it has been going on there.

Follow-up:

1. How did your interpretive group arrive at its conclusions? (method of analyzing the data)
2. What other kinds of information would have been useful to you in arriving at the conclusions or answers to the questions posed?
3. What would happen to your interpretation of the artifacts if the site description was changed?

B. To focus student attention on artifacts and features: Show Part I of the film "The Hunters." Instruct students to view the film from the perspective of an archeologist doing a site survey 100 years from now. Ask them to make a list of the artifacts and features they might find while surveying this site.

C. To sharpen skills of classification and illustrate how evidence can be manipulated to gain maximum information.

Take student-gathered artifacts from the site survey; or have each student contribute five dissimilar artifacts from his or her home.

Divide students into groups. Each group takes one assemblage or group of artifacts and develops a system of classification for that assemblage. (They will probably classify on the basis of the material from which each artifact was made.) Ask them to explain their system.

Then suggest that other systems might be used. An easy one is that of classifying all these items by their function. Another one is by date (i.e., how old) or context (location derived from). Follow-up: Ask students what kinds of questions they might be able to answer by using these systems of classifying:

--material: what kinds of resources were available to the society? what kinds of technology did the society have at its disposal?

--function: what kinds of activities did the people of this society engage in?

--date: how long did the society endure?

D. Excavating a wastebasket:

To prepare: for one day, do not empty your classroom wastebasket (better yet, get another teacher to prepare the wastebasket for you). Instead, compact the material in it after each class for activity period.

Next day: have students "excavate" this site. See if they can reconstruct the previous day's activities.

E. The ultimate: Play "Dig," a simulation, which takes five to six weeks, available from Interact, Inc., Box 262, Lakeside, CA 92040. It asks students to create and bury a culture. Other teams of students then excavate the culture using valid archeological techniques.

III. Finale: Judging archeological interpretations:

A. Show the film "In Search of Ancient Astronauts" (an exposition of von Daniken's theories about extra-terrestrial visitors). Ask students to analyze the film:

--what is von Daniken's basic assumption/hypothesis?
--what kinds of evidence does he use to support his hypothesis? (Give reasons for skepticism or belief)

B. Show any of the films listed above in IB and ask the same questions. Which hypotheses are more convincing, given the data?

IV. Field trips and guest speakers in the Washington, D.C. area:

A. Alexandria Archaeological Research Center: Pam Cressey, 838-4399. (speaker or trip)

B. Fairfax County Archeology Lab will take interested student volunteers on historic and prehistoric digs. Call 237-4881.

C. Take students to Turkey Run Farm and Woodlawn (or similar) plantation. Ask them to systematically compare the material culture exhibited by each site. (Woodlawn has a "What is a House?" information retrieval sheet which also can be adapted for Turkey Run Farm .)

D. A "Guide to Resources on Local Archeology and Indian History" is available from the Public Information Office, Department of Anthropology, Smithsonian Institution, Washington, D.C. 20560; (202) 357-1592.

Written by:

Martha Williams
Archeologist
Fairfax, Virginia

Information from the

National Museum of Natural History

SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

STUDENT FIELD PROJECTS

One need not be an anthropologist and travel to a remote land to carry out a field project. A high school teacher in Fairfax, Virginia offered her students field experience without their leaving the school. She arranged for her students to interview those enrolled in "English as a Second Language" in which seven cultures were represented. The interviewers then traded places with the ESL students offering an opportunity for both groups to learn about the others' values, institutions and rules of behavior. Another teacher in Boston, Massachusetts engaged her students in mini-field projects studying sites such as a neighborhood, office, store, or club. (The above student field projects were described in the winter and spring 1981 issues of *Anthro.Notes*, respectively, published by the National Museum of Natural History.)

An important part of anthropological fieldwork is the interview. *A Celebration of American Family Folklore: Tales and Traditions from the Smithsonian Institution Collections* by Steven J.Zeitlin, Amy J. Kotkin, and Holly Cutting-Baker (available from Pantheon Books) provides not only a collection of family "tales and traditions" but also suggestions for interviewing family members. The leaflet "Blessed Be The Ties That Bind" provides many of the interview questions and ideas from *A Celebration of American Family Folklore* and is available from the Anthropology Outreach and Public Information Office, Department of Anthropology, Smithsonian Institution, Washington, D.C. 20560. Other sources for interviewing techniques are listed on the following pages.

The following references provide some excellent suggestions for constructive student field projects:

Collier, John, Jr. and Malcolm Collier. Visual Anthropology: Photography as Research Method. (rev. & enl. ed.) Albuquerque: University of New Mexico Press, 1986.

Still a valuable resource for topics such as photographing social interaction, interviewing with photographs, and interpreting the cultural inventory.

Crane, Julia G. and Michael V. Angrosino. Field Projects in Anthropology: A Student Handbook. (3rd ed.) Prospect Heights, IL: Waveland Press, 1992

While designed for undergraduate students, the book gives 14 projects that could be revised for high school students. The projects represent some of the most commonly used data collection techniques such as making maps, charting kinship, collecting life histories, and digging into cultural history. A readable text, appropriately designed activities, and an excellent selected annotated bibliography for each project, resulting in a valuable resource for teachers.

Involvement in Society Today. Del Mar, CA: CRM Books, 1971.

Full of interesting activities for students, this book is a collection of everyday situations that are settings for field studies, in which techniques of observation and interpretation are emphasized.

Kottak, Conrad Phillip, ed. Researching American Culture: A Guide for Student Anthropologists. Ann Arbor: University of Michigan Press, 1982.

In guiding undergraduate students to correct scientific methods, the author juxtaposes instructional essays with essays by students and anthropologists. Topics discussed are the researcher's role, key terms, analytic techniques, interviewing questionnaire construction, ethics, and limitation of time and space. Many examples are about American culture.

Spradley, James P. and David W. McCurdy. The Cultural Experience: Ethnography in Complex Society. Prospect Heights, IL: Waveland Press, 1988.

An excellent source by authors who believe in active student involvement. From their teaching experience, they found students did not know what questions to ask and how to ask them. The first section contains five chapters: covering goals of fieldwork, how to find a culture to study in semantics, and how to analyze field data and write an ethnographic account. The second section includes a dozen sample ethnographies ranging from an ethnography of a junior high school to an ethnography of fire-fighters. The book concludes with a six page bibliography.

Spradley, James P. The Ethnographic Interview. Fort Worth, TX: HBJ College Pubs., 1979.

Compared to The Cultural Experience, the next two books by Spradley are far more detailed in methodology for conducting community fieldwork and the instructions are for the student, not the teacher. The two volumes, however, do not contain sample student ethnographies. This excellent book clarifies the nature of ethnography and gives specific guidelines for doing ethnography for professionals and students without doing years of training in anthropology. Spradley sets forth 12 major interview tasks designed to guide the investigator from the starting point of locating an informant to the goal of writing the ethnography.

Spradley, James P. Participant Observation. Fort Worth, TX: HBJ College Pubs., 1980.

The step-by-step instructions show the beginning student how to do fieldwork in their community using participant observation. The activities take several hours each week. The goal is to begin and complete a qualitative research project. This very practical and clearly explained book is divided into two parts: 1) ethnography and culture; and 2) the 12 step developmental research sequence.

Information from the

National Museum of Natural History

SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

ORGANIZATIONS TO JOIN

Below are listed not only anthropology but other social and natural science organizations that publish journals and newsletters. These organizations announce training programs and job openings; offer stimulating lectures, symposia and conferences; and help teachers expand their interests and professional networks.

AMERICAN ANTHROPOLOGICAL ASSOCIATION
4350 N. Fairfax Dr. Suite 640
Arlington, VA 22203
(703) 528-1902, ext. 3005

AAA is the central professional organization of anthropologists. Members receive the quarterly American Anthropologist and the monthly Anthropology Newsletter, which includes a Job Placement Service listing. Also available are career publications, and the Guide to Departments of Anthropology that describes facilities and programs at over 250 schools and museums in the United States and Canada.

AMERICAN PSYCHOLOGICAL ASSOCIATION
750 First St., N.E.
Washington, D.C. 20002
(202) 336-5600

Founded in 1892, the APA is the major psychology organization in the United States; its purpose "to advance psychology as a science, as a profession, and as a means of promoting human welfare." High school teachers may become High School Teacher Affiliates and receive free the monthly APA Monitor; the monthly High School Psychology newsletter, which includes teaching activities and curriculum materials, some of which are useful in anthropology classes, and the booklet Careers in Psychology. Teachers also qualify for special rates to the Association's journals and publications, including the official journal American Psychologist.

ANTHROPOLOGICAL SOCIETY OF WASHINGTON
c/o John Wesley Powell Library of Anthropology
NHB 330 MRC 112
Washington, DC 20560
Stuart Speaker (202) 786-2862

ASW was founded in 1879 by John Wesley Powell, then Director of the Smithsonian Institution's Bureau of Ethnology, to "encourage the study of the Natural History of man especially with reference to America and shall include archeology, somatology, ethnology, and philology." ASW continues to promote the scientific study of man through its newsletter, publications, and open monthly meetings held during the academic year.

ARCHAEOLOGICAL INSTITUTE OF AMERICA
656 Beacon Street
Boston, MA 02215
(617) 353-9361

AIA, a non-profit organization, was established in 1879 to promote research in the U.S. and foreign countries. The AIA publishes the bimonthly Archeology magazine and the American Journal of Archeology. There are over 80 local societies across the U.S. and Canada that sponsor lectures, symposia, field trips to local sites and museums, and foreign study tours. The Fieldwork Opportunities Bulletin published annually each spring lists U.S. and foreign excavations seeking volunteer workers, paid staff members, and students for formal training programs. AIA published Archaeology in the Classroom: A Resource Guide for Teachers and Parents (1996).

COUNCIL ON ANTHROPOLOGY AND EDUCATION
c/o American Anthropological Association
4350 N. Fairfax Dr. Suite 640
Arlington, VA 22203
(703) 528-1902

CAE, organized in 1968 within the American Anthropological Association, is a professional association of anthropologists and educational researchers concerned with the application of anthropology to research and development in education. Its quarterly journal publishes articles about the various education topics, mostly on research but also including the teaching of anthropology at the pre-college level.

MUSEUM EDUCATION ROUNDTABLE
3000 Connecticut Avenue, N.W.
Washington, D.C. 20026
(202) 232-6084

MER is an active communications network encouraging leadership, scholarship, and personal development among educators and museum professionals. Founded in 1969 by educators in Washington, D.C. area museums, MER now serves a worldwide audience of nearly one thousand individuals and institutions through it publications and programs. The Journal of Museum Education: Roundtable Reports, a major publication in museum education and published three times a year, is a forum for discussion of matters of professional concern to museum educators and those interested in the museum as a learning resource. The Journal keeps readers informed of MER activities and the AAM Education Committee. Monthly program meetings in Washington, D.C. feature current topics of interest to museum professionals. Members unable to attend may receive program notes.

NATIONAL ASSOCIATION OF BIOLOGY TEACHERS
11250 Roger Bacon Dr.
Suite 19
Reston, Virginia 22090
(703) 471-1134

NABT is the "only education association exclusively devoted to the needs and concerns of the professional biology teacher." Membership benefits include The American Biology Teacher, a journal published eight times a year; a regularly printed newsletter on NABT activities; special publications available free or at special cost to members; information on travel and study tours, and an annual national conference.

NATIONAL COUNCIL FOR THE SOCIAL STUDIES
3501 Newark St., N.W.
Washington, D.C. 20016
(202) 966-7840

NCSS was founded in 1921 in an effort to unify efforts of numerous local, state, and regional social studies associations. Its central purpose is to improve the quality of social studies education from the elementary grades through college and university levels. NCSS publications include the journal Social Education, which provides articles and practical classroom ideas; Social Studies for the Young Learner for elementary school students, The Social Studies Professional, which contains organizational news; and the Journal of Theory and Research, which describes current research in social studies. Annual and regional meetings offer members opportunities for professional interaction.

NATIONAL SCIENCE TEACHERS ASSOCIATION
1742 Connecticut Ave., N.W.
Washington, D.C. 20009
(202) 328-5800

NSTA, an affiliate of the American Association for the Advancement of Science, is a non-profit educational organization directed to the improvement of science teaching at every level. NSTA publishes journals for three different levels of teaching: Science and Children, The Science Teacher, Science Scope, and The Journal of College Science Teaching. The NSTA Report is a newsletter that provides up-to-date association happenings, conferences, new publications, teaching tips and aids, and special articles. Additional benefits include local chapter activities, awards programs, and an employment registry.

SOCIETY FOR AMERICAN ARCHAEOLOGY
900 Second St., NE #12
Washington, DC 20002-3557
(202) 789-8200, Fax (202) 789-0284

SAA is an international organization dedicated to the research, interpretation, and protection of the archaeological heritage of the Americas. Among the society's publications are Archaeology and Public Education , American Antiquity, Latin American Antiquity, and Archaeologists of the Americas. Various membership categories offered

WASHINGTON ASSOCIATION OF PROFESSIONAL ANTHROPOLOGISTS
Box 23262
L'Enfant Plaza Station
Washington, D.C. 20024

WAPA is "a group of persons who, by reason of training and interest, seek to develop anthropological knowledge and apply it to the needs of society." WAPA offers the opportunity to expand one's network contacts and learn of new employment opportunities as the association actively seeks to increase job opportunities for professionals in full and part-time employment. WAPA holds monthly meetings, publishes a newsletter and membership directory, and sponsors the Praxis Awards for "excellence in translating anthropological knowledge into action." To find out more information on membership, contact the treasurer: Mark Schoepfle, 11963 Heathcote Court, Reston, VA 22091-2741. Phone # (703) 758-0784.

ANTHROPOLOGY OUTREACH OFFICE
NATIONAL MUSEUM OF NATURAL HISTORY
SMITHSONIAN INSTITUTION
1996

Information from the

National Museum of Natural History

SMITHSONIAN INSTITUTION WASHINGTON, D.C. 20560

FIELDWORK OPPORTUNITIES FOR TEACHERS AND STUDENTS

Opportunities for learning about archeology and anthropology are available beyond the classroom for both students and teachers. The leaflet "Student Field Projects" provides ideas and reference books for carrying out primarily ethnographic fieldwork as a school project. This leaflet offers information on fieldwork opportunities within and outside your own community.

Anthropology departments of local universities and colleges, state historic preservation offices, and state archeological societies often engage in local archeological excavations and frequently accept volunteers with no previous fieldwork experience. The Archaeological Institute of America (AIA) provides a listing of state archeologists associated with the national organization. The AIA also produces a yearly field school listing (see below) for the United States and abroad. In addition, *Archaeology* magazine each year features an archeology travel guide to sites open to the public in the Old World (March/April issue) and the New World (May/June issue).

Local museums can also be contacted where volunteers may have an opportunity to work "behind the scenes" in various capacities such as researching, labelling and cataloguing specimens, or perhaps piecing together pottery sherds.

For a comprehensive listing of fieldwork opportunities in the Washington, D.C. metropolitan area, the Smithsonian Institution's Department of Anthropology distributes A Guide to Resources on Local Archeology and Indian History, which includes a listing of museums and organizations, anthropological and archeological societies, fieldwork opportunities, and professionals involved in local archeology and Indian history. For a copy of this free Guide, write: Anthropology Outreach Office, NHB 363 MRC 112, Smithsonian Institution, Washington, D.C. 20560; or call (202) 357-1592.

Each year the Winter issue of *AnthroNotes,* a National Museum of National History Bulletin for Teachers, reviews a selected list of organizations and schools that conduct archeological excavations, scientific expeditions, or field programs in the United States and abroad. Below is a list of just a few organizations that offer fieldwork experience:

Center for American Archeology, Kampsville Archeological Center, named a National Exemplar in science education by the National Science Teachers Association, conducts educational research programs for junior and senior high school students, college students and the non-professional, and separate workshops for teachers. The long-range goal of the program is to record a comprehensive history of 12,000 years of human life in the lower Illinois River Valley. Write: Admissions Office, Kampsville Archeological Center, Kampsville, IL 62053; or call (618) 653-4316.

Crow Canyon Archaeological Center is a non-profit institution specializing in Southwestern archaeological research and education. The following programs introduce participants to archaeological field methods, laboratory techniques, and excavation: The Adult Research Seminars, consisting of week-long sessions; conducted from June through October; transferable college credit is available. The High School Field School also offers transferable credit; applications should be mailed as soon as possible. The Educators' Workshop offers three hours of continuing education credit. Write or call: Crow Canyon Archaeological Center, 23390 County Road K, Cortez, CO 81321; (800) 422-8975 or (303) 565-8975.

University Research Expeditions Program offers an opportunity for the experienced and inexperienced to become a member of a small university field research team. Studies in areas of anthropology, archeology, animal behavior, ecology/botany, and paleontology take researchers to all parts of the globe. Write: University of California Research Expeditions Program, 2223 Fulton, 4th Floor, Berkeley, CA 94720; or call (510) 642-6586.

Earthwatch, a non-profit, tax-exempt organization, invites the public (minimum age 16) to join scientific expeditions throughout the world with museum and university scholars of various disciplines. Write: Earthwatch, 680 Mount Auburn St., Box 403, Watertown, MA 02272; (800) 776-0188; (617) 926-8200.

ORGANIZATIONS TO CONTACT

Anthropology departments at local universities and colleges, state historic preservation offices, and state archaeological societies often organize local archaeological excavations and frequently accept volunteers with no previous fieldwork experience. The Archaeological Institute of America (AIA) offers a listing of state archeologists as part of its yearly field school listing for the U.S. and abroad. This publication includes over 250 opportunities with all information about costs, deadlines, age requirements, and archaeological sites to be excavated and analyzed, for each field school. The cost for the *Archaeological Fieldwork Opportunities Bulletin*, including shipping and handling, is $13.00 for members and $15.00 for non-members. Please send orders and make checks payable to:

Kendall-Hunt Publishing Co.
Order Department
4050 Westmark Drive
Dubuque, IA 52002

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You may also charge your order to Visa or Mastercard by calling (800) 228-0810 or (319) 589-1000.

Archaeology magazine, published by the AIA, features an archaeology travel guide to sites open to the public in the Old World (March/April issue) and the New World (May/June issue).

ANTHROPOLOGY OUTREACH OFFICE
DEPARTMENT OF ANTHROPOLOGY
SMITHSONIAN INSTITUTION
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ARCHAEOLOGY

The Smithsonian Institution receives each year a great many inquiries concerned with archaeology. It is impossible with our small staff to answer each letter personally. Therefore, the following information has been prepared to cover topics most frequently encountered: career information, excavation, fieldwork opportunities, artifact identification, preservation. The information included should satisfy the majority of requests, while also providing avenues along which topics may be pursued further through bibliographic references. You might also consider contacting your local museum, historical society, or archaeological association that deals with matters of regional interest much more than does the Smithsonian. If the enclosed information is not specific enough or does not cover your particular interest, please feel free to write us again. We will help if we can.

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1996

Career Information

Information on career opportunities in archaeology may be obtained by writing or calling to the following:

Society for American Archaeology, 900 2nd St., N.E., Suite 12, Washington, D.C. 20002; (202) 789-8200.

Archeological Institute of America, Boston University, 656 Beacon St.,Boston,MA 02215-2010; (617) 353-9361; FAX (617) 353-6550.

American Anthropological Association, 4350 N. Fairfax Dr., Suite 640, Arlington, VA 22203; (703) 528-1902.

A heavily illustrated magazine that keeps the reader informed of the work of archeologists and excavations around the world is *Archaeology*, written for the general public. To subscribe, write to: Archaeology Magazine, Subscription Service, P. O. Box 420423, Palm Coast, FL 32142-0423; or call (800) 829-5122.

Excavation

Excavation is the archeologist's fundamental means of exploring the past. This in itself sounds more simple and straight-forward than is actually the case. Archeological field methods are complex, and a great amount of training and supervision is necessary before excavation can be carried out effectively. Therefore, it is imperative that the untrained person should not attempt to perform his or her own excavation. Scientific excavation is not merely a matter of recovering buried artifacts. Artifacts themselves tell us relatively little about an extinct culture. Of more importance is the artifact's "association" or "context", which refers to its location or placement in relation to nearby observed indications of human activities such as living structures, burials, storage pits, fire hearths or work areas.

Because it is often impossible or unnecessary to excavate an entire site, the archeologist must know how to select a portion of the site for excavation that will yield a representative sample of the entire site. Besides techniques of sampling and excavation one must also know something about the environmental conditions at the time the site was occupied. This type of information is obtained through the recovery of pollen, soil, food remains, shell, and plant remains during the course of the excavation. The archeologist must also be familiar with many dating methods, such as dendrochronology and radiocarbon dating. These require skilled selection and handling of samples, and careful interpretation of the results obtained. Good intentions are no substitute for scientific procedures in archaeology. The excavation of a site inevitably leads to destruction. Therefore, if the archaeologist does not recover all of the necessary information, it is lost forever. There is no way of going back to correct a mistake in digging, or a failure to record the proper details. Furthermore, the analysis of the data recovered requires skill and training in anthropological techniques. Even here, though, the archeologist's task is not finished; for if the results of the excavation are not reported in a scientific fashion in a journal or other publications, where they can be read and studied by other archeologists, the results of the excavation are useless and digging should not have been undertaken in the first place.

Salvage archaeology is another important aspect of the field in these days of construction activities. It is important to attempt to recover these remains before they are destroyed. If a site is found that is in danger of being destroyed, it is best to bring this to the attention of a professional archeologist before it is too late. A call to a local museum or university with an anthropology department informing them of the danger is usually the best thing in this case.

There are several ways of acquiring the skills necessary for proper archeological excavation, reporting, and publishing. The best of these, of course, is by enrolling in a university program in anthropology or archaeology. Many universities and colleges give courses in archeological techniques and enrollment in these can often be arranged even though a person is not a full-time member of the student body. Night school and museum education programs often provide similar courses. The American Anthropological Association (4350 N. Fairfax Dr., Suite 640, Arlington, VA 22203) publishes each year a *Guide to Departments of Anthropology* which lists members of the departments with their specialties. In addition, there are several books which are useful introductions to the beginning archeologist, some of which are listed in the reading list at the end of this leaflet. Finally, it is important to put your skills to work by excavating a site under the supervision of an experienced archeologist. These opportunities are best obtained through field schools or by participating in excavations of local archeological societies.

Fieldwork Opportunities

Excellent opportunities for inexperienced archeologists (minimum age is usually 16) are through the field schools run by many universities and colleges across the country. These schools often operate by conducting a half day of supervised excavation while the other half will be reserved for cataloguing, cleaning, photography of specimens, or for lectures. Generally, the applicant pays a fee, which includes food, lodging, and equipment for a five to eight week session. Transportation costs are borne by the student. Because a list of field school offerings changes from year to year, any list soon becomes out-of-date. The Archaeological Institute of America (AIA) produces a field school bulletin. Write: Kendall-Hunt Publishing Co., Order Dept.,4050 Westmark Drive, Dubuque, IA 52002; (800) 228-0810. The list includes opportunities for volunteers, staff positions, field schools, and general information, an excellent resource for a beginning archeologist. The AIA listing, which also includes the names and addresses of state archeologists, costs $11.00 ($9.00 for members). Usually a field school conducts excavations in the vicinity of the institution, so regional preferences may influence your choice of application. Since some schools may be filled, it is advisable to apply to several concurrently. This should be done during the winter months. Enrollment is usually filled by April or May. Academic credit is often given for field school participation. Sometimes an archeological course must be taken as a prerequisite to field school acceptance.

Possibilities for fieldwork in the Old World and South America are generally more limited than those within the United States. High costs of transportation and maintenance of a field crew in these areas usually result in only the most experienced students being chosen. However, there are opportunities in most of these projects for volunteers. Here the usual arrangement is for the volunteer to pay his or her own transportation and sometimes his or her maintenance in the field. Volunteer workers may decide to spend only a portion of the summer at an excavation, reserving the remainder of their available time for travel. Many Americans have worked in France, England and the Middle and Near East in this capacity.

Many states have amateur archeological organizations, often assisted by the State archeologist, which conduct summer or week-end excavations and hold meetings to discuss the results of their work. Usually these societies are regional or state organizations. Often they have many competent archeologists as members and publish a society bulletin or newsletter with reports of archeological excavations. Affiliation with these organizations can provide a student or amateur archeologist with valuable training in excavation and publication. To locate your local or regional archeological society, contact the chairman of the anthropology department of a nearby university who should be able to direct you further.

Three further possibilities, among many, for fieldwork experience are Earthwatch, the Center for American Archeology, and Crow Canyon Archaeological Center. For Earthwatch projects, participants contribute toward the funding of scientific research expeditions on which scholars and students then work as a team. For information, write: Earthwatch, 680 Mount Auburn St., Box 403, Watertown, Massachusetts 02272. The Center for American Archeology in Illinois and Crow Canyon Archaeological Center in Colorado conduct educational research programs for junior and senior high school students, college students and the non-professional, and separate workshops for teachers. For further information on these programs, write: Center for American Archeology, Kampsville Archeological Center, PO Box 366, Kampsville, Illinois 62053-0366; and Crow Canyon Archaeological Center, 23390 County Road K, Cortez, CO 81321, (800) 422-8975.

Artifact Identification

Very often a request comes from someone who has found an archeological specimen and wants it identified. This is not always an easy task. It is often difficult to give the age and cultural affiliation of a single artifact for several reasons. First, as previously noted, it is the excavation context and the associated tools that have the most meaning to the archeologist. Single artifacts or isolated groups of artifacts rarely have much scientific significance, particularly if they are not accompanied with precise information as to their original location and chronological contexts. Hence it is usually best to have specimens identified by specialists whose interests are in the area where the specimen originated. For this reason questions of this sort can usually be most effectively answered by the appropriate regional museum, state archeologist, or archeological society, or archeologist of a local college or university. In addition, there are several books which can be referred to for information on different cultural groups and periods. The most useful are those of Chard, Jennings, and Willey. All have good summaries with detailed regional coverage and good illustrations and bibliographies. Finally, the third problem is that in many cases even the specialists are not yet able to identify many specimens.

The preservation of artifacts of bone or other perishable material is another topic of interest. This is a highly technical field, but there are some simple procedures which can be followed. Unfortunately, there is as yet no simple handbook available, and sometimes it is difficult to obtain the necessary chemicals. In this case, your local museum may be able to help you. For most problems of conservation your can refer to books by Plenderleith and Leechman.

Finally, there is frequently an interest in the value of archeological specimens. In general it can be said that arrowheads and other similar Indian artifacts have little monetary value. Rather, value lies in the amount of information that can be gleaned from the specimen by archeologists trained to know the particular styles of different cultures. Other more elaborate artifacts may have considerable market value. These occasionally find their way into the art market. Museums usually are not interested in purchasing single artifacts, preferring entire collections accompanied by detailed information, and even then purchase is very rare. Their most useful collections come from the scientifically documented research of qualified field workers. The collection of artifacts for the purpose of selling them individually literally ruins the importance of a site for science and is therefore a highly destructive act. In fact, many states (as well as most nations) have strongly forced antiquities laws to prevent excavation by untrained persons. See Appendix V in Robbins' Handbook for a listing of these laws. In addition, there are also laws in many countries prohibiting the export of antiquities, and the U.S. customs authorities help enforce some of these laws. There is also a growing number of responsible museums who refuse to accept or to borrow any archeological items unaccompanied by evidence of authorized export according to the laws of their countries of origin. The Smithsonian strongly supports these laws and policies.

SUGGESTED READINGS IN ARCHAEOLOGY

The following is a list of some of the major introductory books and journals in the field. Their bibliographies are extensive and should be consulted by those wishing more detailed information.

General Introduction

Brennan, Louis A. Beginner's Guide to Archeology. Harrisburg, PA: Stackpole Books, 1973.

__________. Artifacts of Prehistoric America. Harrisburg, PA: Stackpole Books, 1971.

Butzer, Karl W. Archaeology as Human Ecology: Method and Theory For a Contextual Approach. Cambridge: Cambridge University Press, 1982.

Deetz, James. Invitation to Archaeology. Garden City: Natural History Press, 1967.

Fagan, Brain M. Ancient North America: The Archaeology of a Continent. New York: Thames and Hudson, 1991.

________. In the Beginning: An Introduction to Archaeology. 6th ed. Boston: Little, Brown & Co., 1988.

Fleming, Stuart. Dating in Archaeology: A Guide to Scientific Techniques. New York: St. Martin's Press, 1977.

Hester, James J. Introduction to Archaeology. 2nd ed. New York: Holt, Rinehart and Winston, 1982.

Hester, Thomas R., Robert Heizer, and John A. Graham. Field Methods in Archaeology. 6th ed. Palo Alto: Mayfield Publishing Co., 1975.

Hole, Frank and Robert Heizer. Prehistoric Archaeology: A Brief Introduction. New York: Holt, Rinehart, and Winston, 1977.

Joukowsky, Martha. A Complete Manual of Field Archaeology: Tools and Techniques of Fieldwork for Archeologists. Englewood Cliffs, New Jersey: Prentice-Hall, Inc., 1980.

Robbins, Maurice and Mary B. Irving. The Amateur Archeologist's Handbook. 3rd ed. New York: Harper & Row Pubs., 1981.

Sharer, Robert J., and Ashmore, Wendy. Archaeology: Discovering Our Past. Palo Alto, CA: Mayfield Pub., 1987.

Thomas, David Hurst. Archaeology. 2nd ed. New York: Holt, Rinehart, and Winston, 1989.

Trigger, Bruce. Beyond History: The Methods of Prehistory. (Case Studies in Cultural Anthropology Series., edited by George and Louise Spindler) New York: Irvington Pubs., 1982.

Willey, Gordon R. and Jeremy Sabloff. A History of American Archaeology. 2nd ed. San Francisco: W.H. Freeman Co., 1980.

Willey, Gordon R. Portraits in American Archaeology: Remembrances of Some Distinguished Americanists. Albuquerque: University of New Mexico Press, 1989.

General Prehistory

Bonnichsen, Robson, and Turnmire, Karen L., eds. Clovis: Origins and Adaptations. Peopling of the Americas Publications. Corvallis, OR: Center for the Study of the First Americans, Oregon State University, 1991.

Bryan, Alan Lyle, ed. New Evidence for the Pleistocene Peopling of the Americas. Orono, ME: Center for the Study of Early Man, University of Maine, 1986.

Clark, Grahame. World Prehistory, and Outline. 2nd ed. London: Cambridge University Press, 1970.

Coe, Michael D.; Snow, Dean; and Benson, Elizabeth. Atlas of Ancient America. New York: Facts on File, 1986.

Daniel, Glyn. Short History of Archaeology. (Ancient Peoples and Places Series no. 100.) New York: Thames and Hudson, 1981.

Fagan, Brian. Ancient North America: The Archaeology of a Continent. 2nd ed. NY: Thames Hudson, 1995.

________. Kingdoms of Gold, Kingdoms of Jade: The Americas Before Columbus. NY: Thames & Hudson, 1991.

Jennings, Jesse D. Prehistory of North America. 3rd. ed. Palo Alto, CA: Mayfield Pubs., 1989.

Jennings, Jesse D., ed. Ancient North Americans. San Francisco: W. H. Freeman & Co., 1983. Ancient South Americans, 1983.

Jennings, Jesse D., ed. Ancient Native Americans. San Francisco: W.H. Freeman, 1978.

Justice, Noel D. Stone Age Spear and Arrow Points of the Midcontinental and Eastern United States. A Modern Survey and Reference. Bloomington, IN: Indiana University Press, 1988.

Mead, Jim I., and Melzer, David J., eds. Environments and Extinctions: Man in Late Glacial North America. Orono, ME: Center for the Study of Early Man, University of Maine at Orono, 1985.

Meyer, Karl E. The Plundered Past. New York: Macmillan, 1977.

Snow, Dean R. The Archaeology of North America. (The Indians of North America Series.) New York: Chelsea House, 1989.

________. The Archaeology of New England. (New World Archaeology Record Series.) New York: Academic Press, 1980.

Snow, Dean R., ed. Native American Prehistory: A Critical Bibliography. (Newberry Library Center for the History of the American Indian Bibliographical.) Bloomington: Indiana University Press, 1980.

Trigger, Bruce G., ed. Native Shell Mounds of North America. (The North American Indian Series.) Garland Pub., 1986.

Willey, Gordon, ed. Pre-Colombian Archaeology: Readings from Scientific American. San Francisco: W.H. Freeman, 1980.

Williams, Stephen. Fantastic Archaeology: The Wild Side of North American Prehistory. Philadelphia: University of Pennsylvania Press, 1991.

Historical Archaeology

Deetz, James. In Small Things Forgotten: The Archeology of Early American Life. New York: Doubleday, 1977.

Jelks, Edward B. Historical Dictionary of North American Archeology. New York: Greenwood Press, 1988.

Leone, Mark P., and Potter, Parker B., Jr., eds. The Recovery of Meaning:Historical Archeology in the Eastern United States. Washington, DC: Smithsonian Institution Press, 1988.

Neiman, Frazer D. The "Manner House" Before Stratford (Discovering the Clifts Plantation). Stratford: A Stratford Handbook, 1980.

Noel-Hume, Ivor. Historical Archaeology. New York: Alfred A. Knopf, 1969.

__________. A Guide to Artifacts of Colonial America. New York: Alfred A. Knopf, 1970.

__________. Martin's Hundred. New York: Alfred A. Knopf, 1982. (Dell paperback, 1983)

Schuyler, Robert L., ed. Historical Archaeology: A Guide to Substantive and Theoretical Contributions. Baywood Pubs. Co., Inc., 1978.

Singleton, Theresa, ed. The Archaeology of Slavery and Plantation Life. Orlando, FL: Academic Press, 1985.

Conservation and Preservation

Bachmann, Konstanze, ed. Conservation Concerns: A Guide for Collectors and Curators. 1992. University Products, Inc., Dept. F117, 517 Main St., P.O. Box 101, Holyoke, MA 01041-0101.

Ethnographic and Archaeological Conservation in the United States. Washington, D.C.: National Institute for the Conservation of Cultural Property, Inc., 1984.

Goodyear, Frank H. Archaeological Site Science. New York: American Elsevier Pub. Co., 1971.

Kenworthy, Mary Ann, et al., Preserving Field Records: Archival Techniques for Archaeologists and Anthropologists. 1985. University Products, Inc., Dept. F117, 517 Main St., P.O. Box 101, Holyoke, MA 01041-0101.

National Committee to Save America's Cultural Collections. *Caring for Your Collection*. 1992. University Products, Inc., Dept. F117, 517 Main St., P.O. Box 101, Holyoke, MA 01041-0101.

Rose, Carolyn and de Torres, Amparo D., eds. *Storage of Natural History Collections: Ideas and Practical Solutions*. 1992, 1995 second printing. Society for the Preservation of Natural History Collections, c/o Julia Golden, Dept. of Geology, University of Iowa, 121 Trowbridge Hall, Iowa City, IA 52242-1379.

Rose, Carolyn, Catharine Hawks, and Hugh Genoways, eds. *Storage of Natural History Collections: A Preventive Conservation Approach. Vol. 1*. Society for the Preservation of Natural History Collections, 1995 (address above).

A Suggested Curriculum for Training in Ethnographic and Archaeological Conservation. Washington, D.C.: National Institute for the Conservation of Cultural Property.

Timmons, Sharon, ed. *Preservation and Conservation: Principles and Practices*. (Proceedings of the North American International Regional Conference, Williamsburg, Va. and Philadelphia, Pa., September 10-16, 1972.) D.C. National Trust for Historic Preservation: The Preservation Press, 1976.

Journals

American Antiquity. Journal of the Society for American Archaeology, 1703 New Hampshire Ave., N.W. Washington, D.C. 20009. (New World Archaeology)

American Anthropologist. Journal of the American Anthropological Association, 4350 North Fairfax Dr., Suite 640, Arlington, VA 22203-1621. (New and Old World Anthropology)

American Journal of Archaeology. American Journal of Archaeology, Archaeological Institute of America, 656 Beacon St., Boston, Massachusetts 02215-2010. (Old World Archaeology)

Antiquity. Antiquity Publications Ltd., W. Heffer and Sons, Cambridge, England CB2 1LW (mainly Old World Archaeology)

Archaeology. Archaeology Magazine, Subscription Service, P. O. Box 420423, Palm Coast, FL 32142-0423; or call (800) 829-5122. (The March/April issue features an archaeology travel guide to site available to the public in the Old World--Africa, Europe, the Pacific, Asia, South and Central America, and Middle and Near East. The May/June issue cover archeological sites in the New World--Canada, Mexico, and the United States.)

Journal of Field Archaeology. Association of Field Archaeology. Published by Boston University, 745 Commonwealth Ave., Boston, Massachusetts 02215.

North American Archeologist. Baywood Publishing Co., 121 Main St., P.O. Box D, Farmingdale, New York 11735.

World Archaeology. Routledge & Kegan Paul Ltd., 68-74 Carter Lane, London EC4.